Advanced Master's Degree

Gynecologic Pathology and Assisted Reproduction

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Advanced Master's Degree
Gynecologic Pathology and Assisted Reproduction

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

Website: **www.techtitute.com/us/medicine/advanced-master-degree/advanced-master-degree-gynecologic-pathology-assisted-reproduction**

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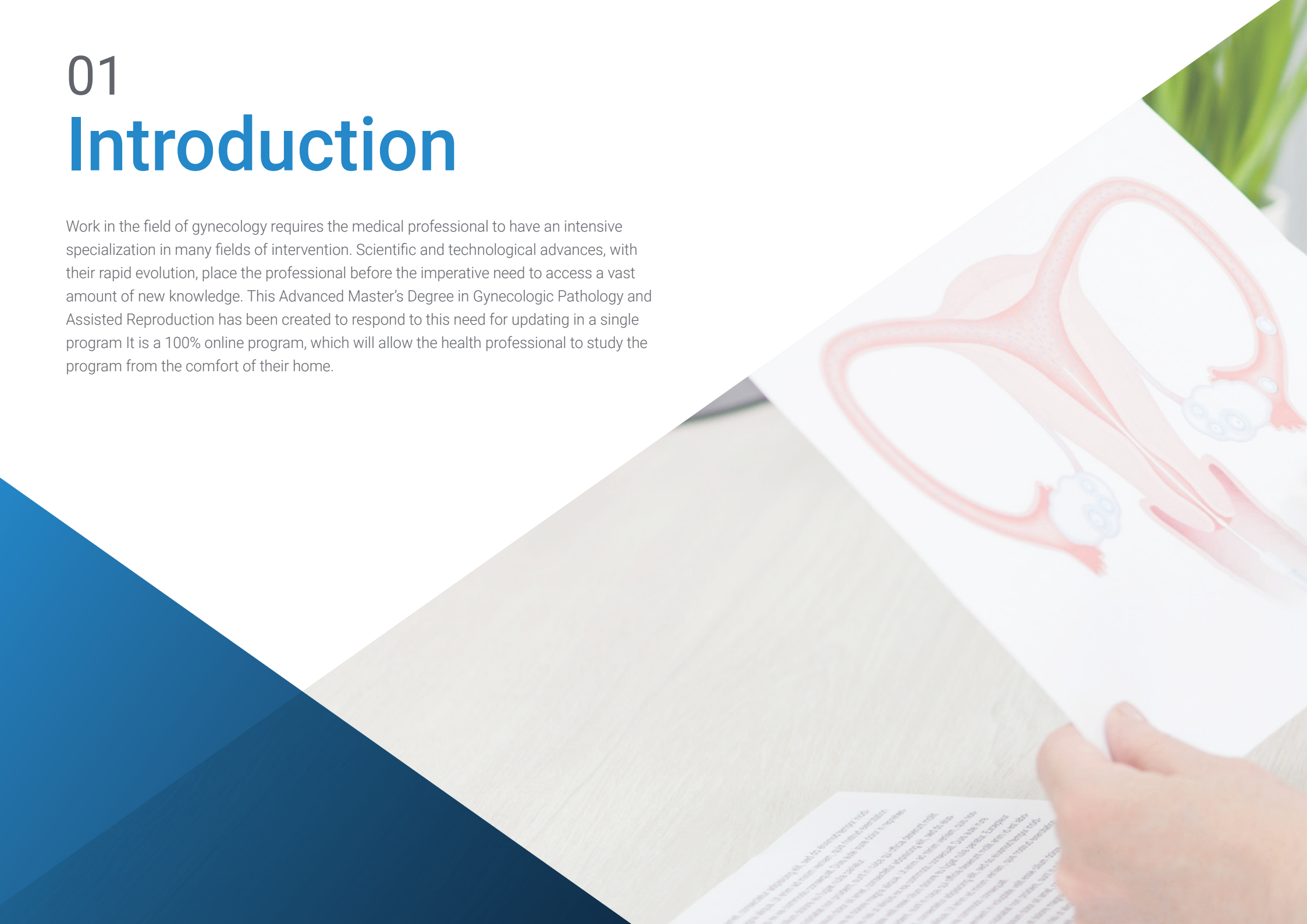
01

Introduction

Work in the field of gynecology requires the medical professional to have an intensive specialization in many fields of intervention. Scientific and technological advances, with their rapid evolution, place the professional before the imperative need to access a vast amount of new knowledge. This Advanced Master's Degree in Gynecologic Pathology and Assisted Reproduction has been created to respond to this need for updating in a single program It is a 100% online program, which will allow the health professional to study the program from the comfort of their home.



A program that will allow you to grow in your profession with the confidence of having all the essential support systems and flexibility to achieve the skills of a top professional"

Gynecological care has changed exponentially in recent times due to advances in diagnostic and treatment systems in all fields of practice.

One of the most relevant fields is gynecologic oncology. The social and emotional burden that gynecologic cancer has on today's society means that scientific and professional interest in this discipline is on the rise.

In order to keep abreast of advances in surgery and gynecologic oncology, it is essential for specialists to maintain a constant specialization that avoids obsolescence and allows them to continue providing quality care. Another of the most important interventions due to the number of patients is related to reproduction and its processes. Reproductive problems have become one of the most frequent situations in current society. It is a situation that has made assisted reproduction one of the growing medical specialities in recent decades.

Rapid advances and the need for constant updating in all these aspects require the professional to make an intense effort to remain at the forefront. An effort that may be too great to be taken on by working professionals. This Advanced Master's Degree is a unique educational experience, with a greater scientific, technical, teaching and practical scope that offers you all the necessary knowledge to be part of the medical vanguard in this area of intervention. Everything the professional needs to know, in one place and with all the facilities for learning.

This program will emphasize each and every one of the areas of interest in gynecological care, paying special attention to three of the most important: the approach to oncological problems, assisted reproduction and minimally invasive surgery.

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

- Clinical cases presented by experts in the different specialties
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Diagnostic and therapeutic developments in Gynecology and Assisted Reproduction
- Presentation of practical workshops on procedures, diagnosis, and treatment techniques
- Real images in high resolution and practical exercises where the self-evaluation process can be carried out to improve learning
- Algorithm-based interactive learning system for decision-making in the presented clinical situations
- Special emphasis on test-based medicine and research 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

Designed to be totally affordable, this Advanced Master's Degree will become a tool for professional growth that will bring you up to date on each and every one of the most relevant developments on the international scene"

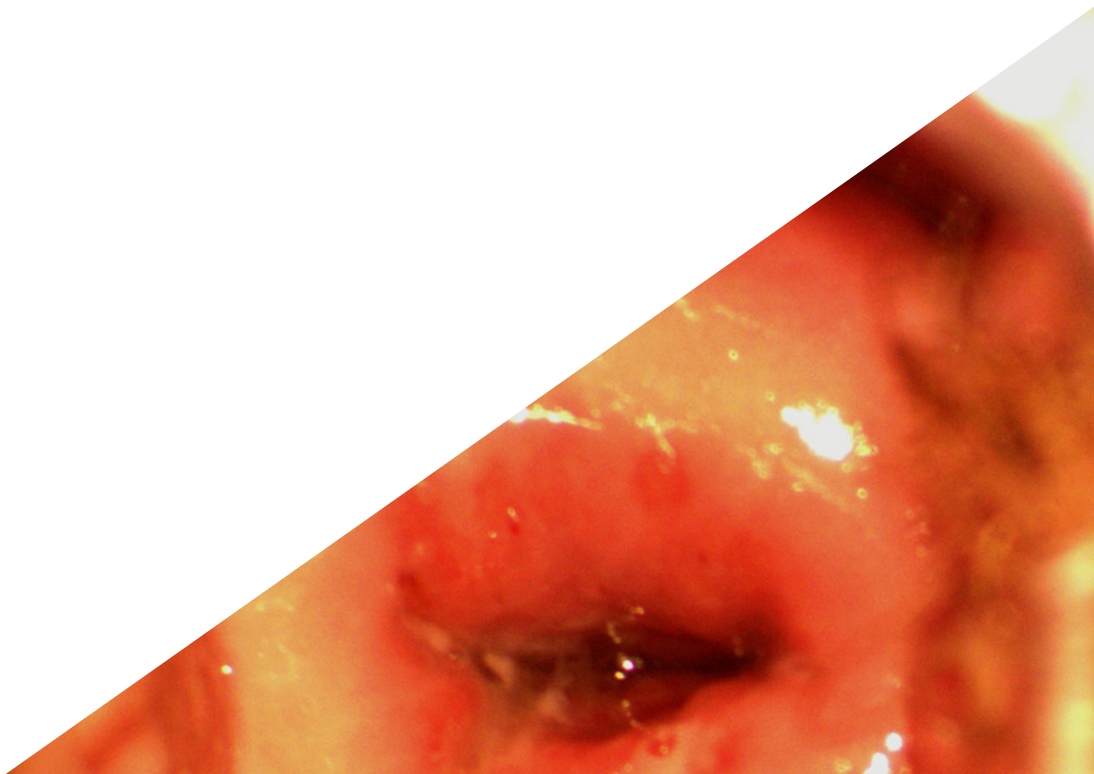
This Advanced Master's Degree is the best investment you can make for your future. A specialization created to be compatible with your professional and personal life that will take you to your goal in the easiest way, optimizing your time and effort"

The content, which is developed entirely by professionals in the sector, will allow you to assimilate the learning through an innovative concept of telepractice, with which you will be able to observe the performance of the techniques on real patients.

Its teaching staff is made up of leading professionals in the sector. Practicing professionals who bring to this program the experience of their work, as well as recognized specialists belonging to leading scientific societies.

Thanks to its multimedia content elaborated with the latest educational technology, this program offers the professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning programmed to work in real situations.

This program is designed around Problem-Based Learning, whereby the physician must try to solve the different professional practice situations that arise during the course. For this purpose, the physician will be assisted by an innovative interactive video system created by renowned and experienced experts in the field with extensive teaching experience.



02

Objectives

The main objective of this Advanced Master's Degree in Gynecologic Pathology and Assisted Reproduction is to offer you a quality educational program: the most complete syllabus, first-class teachers, a highly efficient methodology, and a teaching staff of experts in the field. A combination that will lead you to achieve your goals in the easiest possible way, with total compatibility with your professional and personal life.

This Advanced Master's Degree in Gynecologic Pathology and Assisted Reproduction is designed to provide the most up-to-date knowledge in these fields of medical intervention, in a single and high-impact program"

General Objectives

- Gain up-to-date, specialist knowledge of the procedures and techniques performed in gynecologic oncology, incorporating the latest advances in the discipline in order to increase the quality of daily medical practice
- Know all the material available to perform endoscopic and hysteroscopic surgery
- Know the protocol for the preparation of the endoscopy operating room
- Learn about general aspects such as ergonomics in the laparoscopic and electrosurgical operating rooms to be used in gynecological procedures
- Apply different appropriate techniques in each specific clinical case
- Learn about female pelvic and abdominal anatomy
- Create a training model (pelvi-trainer) for the performance of laparoscopic suturing and other exercises leading to the acquisition of dissection and cutting skills
- Learn hysteroscopic techniques and their application in uterine pathology
- Establish a series of alternatives to manage benign ovarian pathology
- Know how to treat benign uterus pathology
- Learn techniques to resolve pelvic floor problems using laparoscopy
- Acquire up-to-date concepts in anatomy, physiology, embryology and genetics, which will help to understand reproductive diagnostics and treatments
- Understand in detail the aspects related to the initial assessment of a sterile couple. Study criteria and referral to Reproduction Units. Basic clinical examination, request and interpretation of the results of complementary tests
- Perform an appropriate assessment and clinical orientation of the couple. Indication of request for specific tests based on the above findings
- Have an exhaustive knowledge of the different types of medical treatment, indications and their choice according to the profile of the patient and their partner
- Know the indications and surgical techniques that could improve the reproductive results of our patients. Alterations in uterine morphology (congenital or acquired). Endometriosis. Tubal Surgery
- Know the techniques used in the Andrology, IVF and cryobiology laboratories. Diagnostic techniques and sperm selection techniques. Oocyte evaluation. Embryonic Development
- Describe the types of genetic embryonic studies that are available, know their possible indications and be able to interpret the results
- Know the current legal situation of the treatments for assisted reproduction in our country
- Know the main scientific and patient societies in the field of Reproductive Medicine

Take the first step to get up to date on the latest developments in Gynecologic Pathology and Assisted Reproduction"

Specific Objectives

Module 1. Female Surgical Anatomy

- Review the anatomy of the abdominal wall
- Review the anatomy of the pelvic and abdominal visceral system, including the upper abdomen
- Refresh understanding of pelvic vascular system anatomy and review the para-aortic vascular system and the vena cava
- Identify the different parts of the lymphatic system and their detailed laparoscopic management
- Learn about the functional anatomy of the female pelvic floor
- Determine vulvo-vaginal area exploration and its relation to pelvic floor pathology
- Study sympathetic and parasympathetic nerve anatomy of the female pelvis

Module 2. Hysteroscopic Surgery

- Prepare the material for diagnostic and surgical hysteroscopy
- Update the new technological advances in hysteroscopy, such as morcellators, lasers and endometrial ablation systems
- Describe the tools to perform hysteroscopy in the office
- Acquire up-to-date knowledge of the literature on advances in hysteroscopy
- Explain advanced techniques, such as malformation treatment or hysteroscopic myomectomy
- Improve success rate in consultation
- Acquire up-to-date knowledge of the indications for office or surgical hysteroscopy
- Learn the latest developments in hysteroscopic surgery
- Acquire skills to resolve hysteroscopic complications, typical of the technique, such as perforations or vasovagal syndrome

- Identify the different techniques used in uterine morcellation and myoma morcellation laparoscopically in a watertight manner to avoid the possibility of dissemination in case of uterine sarcoma
- Select the different endoscopy applications within the different modalities of complexity in hysterectomy
- Acquire up-to-date knowledge of the use of laparoscopy in uterine malformations and their resolution
- Incorporate the advances of the laparoscopic neovagina technique
- Incorporate theoretical knowledge related to vaginal vault dehiscence
- Identify the different types of uterine mobilizers
- Acquire up-to-date knowledge of the evaluation procedures for pelvic floor defects
- Acquire up-to-date knowledge of procedures to manage ectopic pregnancy using laparoscopy
- Acquire up-to-date knowledge of procedures to manage ovarian torsion using laparoscopy
- Acquire up-to-date knowledge of the procedures to manage pelvic infections using laparoscopy
- Establish the strategy to adequately access the abdominal cavity
- Describe the process of taking an exploratory biopsy and abdominal cytology using laparoscopy
- Acquire up-to-date knowledge of the laparoscopic management of ovarian remnant syndrome
- Update the procedures to manage uterine fibroids
- Establish the strategy to reduce bleeding in laparoscopic myomectomy

Module 3. Exploratory Laparoscopy and Benign Adnexal Pathology

- Define the specific technique in suturing and intracorporeal and extracorporeal knotting
- Adapt the avascular spaces for endoscopic surgery
- Acquire fluency in the resolution of simple pathologies such as endometrial polyps and hyperplasia

Module 4. Benign Uterine Pathology and Dysgenesis

- Acquire up-to-date knowledge of management procedures for benign ovarian and tubal pathology, including cystectomy and adnexectomy
- Update procedures to manage large complex tumors

Module 5. Pelvic Floor Pathology and Use of Vaginal Meshes

- Determine vulvo-vaginal area exploration and its relation to pelvic floor pathology
- Review the functional anatomy of the female pelvic floor
- Review the sympathetic and parasympathetic nervous anatomy of the female pelvis
- Identify abdomino-pelvic vascular abnormalities
- Select the different types of laparoscopic and vaginal meshes for the resolution of such abnormalities
- Incorporate advances in the application of cystoscopy after reparative techniques
- Review the scientific evidence on the use of endoscopy in pelvic floor pathology
- Gain a detailed understanding of the use of laparoscopic sacrocolpopexy
- Foresee complications and their management in pelvic floor pathology
- Explain the procedures for laparoscopic repair of paravaginal defects
- Explain the placement procedure for different meshes to resolve urinary incontinence

Module 6. Laparoscopy in Endometriosis

- Conduct detailed analyses of patients with possible endometriosis
- Incorporate advances in the application of imaging techniques and tumor markers to diagnose endometriosis
- Describe the classifications of endometriosis by different authors
- Explain the therapeutic possibilities of endometriosis in each specific case
- Acquire up-to-date knowledge of the procedures to manage endometriosis in the recto vaginal and ovarian septum
- Acquire up-to-date knowledge of the procedures to manate patients with endometriosis involving the lateral compartment

- Acquire up-to-date knowledge of the management procedures for the recommended medical treatment of endometriosis
- Acquire up-to-date knowledge of treatment in cases of intestinal endometriosis
- Acquire up-to-date knowledge of laparoscopic management procedures for endometriosis of urinary origin
- Describe the main characteristics of extra pelvic endometriosis, such as in the abdominal wall, in the lungs and other organs
- Know the reproductive effects of endometriosis treatment

Module 7. Minimally Invasive Surgery

- Delve deeper into the history of laparoscopy
- Gain a deeper understanding of how to prepare the endoscopic operating room
- Know the correct postural factors and ergonomics
- Approach the management of patients pre- and post-operatively
- Know the details of conventional laparoscopic operating rooms
- Determine the anesthetic and recovery details of patients
- Learn Fast-Track postoperative management and the ERAS protocol
- Describe the main features irrigation and suction systems

Module 8. Instrumentation, Materials and Electrosurgery

- Manage the preparation of the surgical site before each operation
- Establish skin cleansing and asepsis
- Learn how to position patients on the operating table
- Learn the peculiarities of integrated operating rooms
- Increase knowledge of anesthetic aspects related to endoscopy
- Learn the different applications of bipolar and monopolar energy in instrumentation
- Acquire information about electrosurgery for its use in clinical practice
- Select morcellation instruments and apply them safely
- Describe the main features of specimen extraction bags
- Determine the types and use of tissue sealants

Module 9. General Training in Minimally Invasive Surgery

- Identify dissection and cutting instruments for laparoscopy and the use of each piece of equipment
- Select the correct optics for each specific patient
- Differentiate between entry trocars used in surgeries
- Perform pelvitrainer simulation exercises
- Learn how to assemble a homemade pelvitrainer
- Explain the use of learning pyramids
- Identify the types of laparoscopic simulators
- Acquire up-to-date knowledge of animal simulation procedures
- Bring new advances to cadaver simulation procedures
- Apply simulated organ models
- Acquire up-to-date knowledge of simple laparoscopic suturing procedures

Module 10. Laparoscopic Suture Training

- Explore all the material for laparoscopic suturing, including suture holders, suture threads, needles and other instruments
- Give a detailed description of all the accessory material for gynecological laparoscopy
- Distinguish the types of recorders available for surgery
- Acquire up-to-date knowledge of the orientation of laparoscopic vision systems
- Identify the types of insufflators and how they work
- Identify general surgical instruments

Module 11. Complications in Minimally Invasive Surgery

- Acquire up-to-date knowledge of the procedures to manage vascular lesions using endoscopy
- Acquire up-to-date knowledge of the procedures to manage intestinal lesions using endoscopy
- Acquire up-to-date knowledge of the procedures used to manage urological lesions using endoscopy
- Identify the main characteristics of abdominal wall injuries and complications
- Explain how to manage complications in radical hysterectomy
- Select the use of hemostatic agents in endoscopy
- Foresee the complications derived from pelvic floor meshes
- Foresee the complications that occur intraoperatively, as well as those that go unnoticed during surgery
- Determine nervous and other complications, such as pulmonary thromboembolism (PTE), infections, etc

Module 12. Ultra-Minimally Invasive Surgery

- Explain the main characteristics of adhesions and how to prvent them
- Describe laparoscopic tubal chromopertubation
- Incorporate the advances in the 3 mm laparoscopic technique
- Select specific instruments for mini laparoscopy
- Acquire up-to-date knowledge of the specific technique for 3 mm ports
- Incorporate the novel aspects of single-port laparoscopy
- Describe the main characteristics of the instrumentation specific single-port
- Update single-glove technique performance
- Update specific single-port technique
- Describe the advantages of each of the ultra mini-invasive techniques
- Foresee technical problems derived from using these methods in interventions

Module 13. Robotic Surgery in Gynecology

- Incorporate new options, such as surgery without entry trocars, into practice
- List the advantages and disadvantages of robotic surgery in gynecology
- Acquire up-to-date knowledge of the different types of robotic systems for surgery, such as the Da Vinci, Zeus or Amadeus
- Identify how to apply this type of surgery in gynecology
- Describe the specific instrumentation procedures used in robotic surgery
- Evaluate the financial aspects of robotic surgery
- Foresee the complications typical of robotic surgery
- Identify how to apply single-port in gynecologic robotic surgery
- Acquire up-to-date knowledge of on new robotic advances

Module 14. Biological Basis of Cancer

- Recognize and understand the molecular bases of carcinogenesis as well as its development and metastasis production
- Define the basis of cellular growth regulation
- Understand the role of carcinogens in the formation of genital cancer
- Gain up-to-date knowledge of cancer genetics
- Understand the cellular mechanisms of programed cell death and apoptosis and their relationship and activity with malignant pathology
- Interpret the mechanisms of cancer production and distant metastatis at a molecular level
- Identify the origins of genetic alterations that provoke cancer
- Identify the epigenetic changes and oncogenes related with genital tract tumor pathology
- Explain the mechanisms tumor neoformation in blood vessels
- Recognize respiratory symptomatology, such as that caused by pleural effusion, in the treatment of gynecologic cancer

Module 15. Basis of Chemotherapy Treatment, Adverse Affects and New Therapies

- Identify the essentials for the use of chemotherapy in gynecologic oncology as well as adverse effects and complications
- Identify the basic factors that are involved in chemotherapy treatment
- Highlight the influence of chemotherapy in the cellular cycle
- Identify the action mechanisms of antineoplastic agents
- Recognize the mechanisms for the resistance of medical treatments in gynecologic cancer
- Gain up-to-date knowledge of toxicity and side effects
- Review the available antineoplastic drugs and their characteristics
- Identify cases in which patient observation can be used without using adjuvant treatment
- Understand the role of new tests such as positron emission tomography for cervical cancer
- Evaluate the role of tumor markers such as SCC
- Acquire up-to-date knowledge of the role of laparoscopy in performing a radical hysterectomy and the para-aortic lymphadenectomy for non-early tumor stages
- Evaluate the use of medical and surgical therapy in mestastatic, recurrent or persistent illness
- Study and analyze the postoperative care of patients to identify any complications early on
- Appropriately assess the role of chemotherapy in gestational trophoblastic disease
- Manage the progression of pelvic tumor disease in the most effective way

Module 16. Endometrial Cancer I

- Identify the different types of endometrial cancer and perform the appropriate diagnostic and disease extension methods
- Gain up-to-date knowledge on the epidemiology etiopathogenesis of endometrial cancer
- Evaluate patients with a family history of hereditary carcinomas such as Lynch Syndrome
- Understand the diagnostic process for endometrial cancer
- Implement new molecular diagnostic tests for premalignant and malignant endometrial pathology
- Understand and implement surgical treatments in an appropriate way in the treatment of endometrial cancer
- Establish the different uses of the surgical approach both by laparotomy and laparoscopy in endometrial cancer, and update knowledge on the application of robotic surgery in endometrial cancer
- Review adjuvant therapeutic options after primary treatment of endometrial cancer
- Analyze the role of radiotherapy and adjuvant chemotherapy in endometrial cancer
- Understand the applications of hormonal treatment in endometrial cancer

Module 17. Endometrial Cancer II

- Evaluate the distinct types of patients with endometrial cancer in order to implement the most appropriate treatment in each individual case
- Recognize precancerous endometrial lesions and apply the most appropriate treatment
- List the different histological types of endometrial cancer and the different tumor types
- Recognize and interpret the different imaging tests needed for the diagnosis and staging of endometrial cancer
- Interpret the distinct tumor markers and there use in the possible screening of endometrial cancer
- Classify endometrial pathology by FIGO prognostic classification
- Classify the different high and low-risk endometrial tumors
- Study the new surgical techniques for treating high risk endometrial cancer
- Gain up-to-date knowledge on the treatment of some specific endometrial tumors such as the clear cell and serious papillary types
- Review how to deal with recurring endometrial cancer including surgery, radiotherapy and /or chemotherapy as well as evidence on the follow-up treatment and prognosis of endometrial tumors

Module 18. Cervical Cancer I

- Identify pre-invasive pathologies of the cervix and correctly apply early diagnosis methods
- Determine the etiology and etiopathogenesis of cervical cancer and its stages of development
- Gain up-to-date knowledge of the distant imaging techniques for diagnosing cervical cancer such as magnetic resonance and scanning
- Acquire up-to-date knowledge of the treatment for preinvasive cervical lesions including surgery and immunotherapy
- Identify the role of the sentinel node in cervical cancer and the pelvic sentinel node labeled with indocyanine green
- Gain up-to-date knowledge of the use of concurrent and neoadjuvant chemotherapy in cervical cancer
- Compare the characteristics of squamous cell carcinoma and cervical adenocarcinoma

Module 19. Cervical Cancer II

- Classify and treat cervical cancers in the most appropriate way
- Know the risk factors for contracting the human papillomavirus
- Review the application of techniques for early diagnosis of cervical cancer and hereditary-familial diseases affecting the cervix
- Evaluate the role of FIGO and TNM classification in cervical cancer and its prognostic role
- Revise the different invasive surgical techniques for cervical cancer, especially the different types of radical hysterectomy with or without nerve preservation
- Identify the indications of chemotherapy and radiotherapy in cervical cancer
- Gain up-to-date knowledge of the invasive cervical adenocarcinoma and adenocarcinoma in situ

Module 20. Ovarian Cancer I

- Identify patients at risk of ovarian cancer and perform a precise preoperative diagnosis
- Review the epidemiology and etiopathogenesis of ovarian and fallopian tube cancer
- Review the possibilities of screening by ultrasound and the tumor markers for the early detection of ovarian cancer
- Establish the new criteria for pathological and molecular classification of ovarian cancer
- Evaluate the different clinical manifestations, highlighting the value of ultrasound, magnetic resonance imaging and scanning in the diagnosis of ovarian cancer
- Analyze the role of tumor serological markers CA125, CA19.9, CEA, HE4 and other rare tumor serological markers in ovarian cancer
- Specifically analyze the role of complete cytoreduction and its prognostic implications
- Analyze the role of interval surgery in ovarian cancer and establish the most appropriate adjuvant chemotherapy steps and biological treatments for each case
- Identify the possibilities available for the follow-up of patients with ovarian cancer
- Analyze the controversies on the management of ovarian and fallopian tube cancer

Module 21. Ovarian Cancer II

- Apply the most appropriate surgical or chemotherapy treatment for each case of ovarian cancer
- Evaluate STIC tubal lesions as precursors of ovarian cancer
- Gain up-to-date knowledge on hereditary-familial ovarian cancer and new predisposing genetic mutations
- Indicate the distinct pathological types of ovarian and fallopian tube cancer and relate them to the different diagnostic tests for studying the extension and initial diagnosis of each one
- Classify the different types of ovarian cancer according to the FIGO classification and determine the general approach surgical procedures
- Evaluate when a patient should preferentially receive neoadjuvant chemotherapy for ovarian cancer
- Analyze the role of radiotherapy and hormone therapy in endometrial cancer
- Review and gain up-to-date knowledge on intraperitoneal chemotherapy treatments and hyperthermic therapy in ovarian and peritoneal cancer

Module 22. Vulvar Cancer I

- Identify the premalignant pathology in the vulva and apply the appropriate diagnostic techniques in each case
- Interpret normal colposcopic and vulvar examination, and interpret abnormal findings on both colposcopic and vulvoscopic examination
- Describe the etiology of vulva cancer and its relationship to recurrent HPV infection
- Assess the role of possible vulvar cancer screening and hereditary risk factors in pathological alterations
- Describe the different histological types of vulvar cancer and the most efficient tests for diagnosis and extension study
- Review the use of tumor markers in vulvar cancer
- Review the procedure for addressing a primary vulvar lesion
- Update on the management of advanced vulvar cancer, both primary tumor and lymph node chains
- Evaluate how to deal with a recurrent vulva carcinoma
- Review the follow-up care of vulvar cancer patients for early detection of recurrences
- Study the characteristics and treatment of tumors of the Bartholin's glands and basal cell carcinomas of the vulva

Module 23. Vulvar Cancer II

- Diagnose Invasive Paget's Disease of the vulva. Assess the most appropriate management for each case of the disease
- Review the etiopathogenesis of precancerous lesions of the vulva and VIN and VAIN lesions
- Review staging of vulvar cancer according to FIGO classification
- Review the prevalence, and identify the types, clinical manifestations, diagnosis and treatment of non-invasive Paget's disease in the vulvar area
- Relate the clinical manifestations of invasive carcinoma of the vulva to its dissemination routes
- Revise the treatment and handling of the inguinal and pelvic ganglionic chains
- Assess the sentinel lymph node technique for vulvar pathology
- Analyze the role of chemotherapy and radiotherapy in advanced vulvar cancer
- Study the prognosis of the different types of vulva carcinoma
- Evaluate the clinical and diagnostic characteristics as well as how to manage melanoma of the vulva
- Review the clinical aspects of verrucous carcinoma of the vulva and the different types of vulvar sarcoma, as well as their characteristics and management

Module 24. Uterine Sarcoma I

- Identify and classify the different anatomopathological forms of uterine sarcoma
- Appropriately manage early and advanced stage sarcomatous pathology of the uterus and adequate assessment of its prognosis
- Revise the epidemiology of a uterine sarcoma
- Acquire up-to-date knowledge of the anatomopathologic characteristics of the different histologic types of uterine sarcoma
- Evaluate the role of tumor markers in sarcoma of the uterus
- Review the indications and surgical techniques, as well as radiotherapy and chemotherapy, for the treatment of early stage uterine leiomyosarcoma
- Study the prognostic factors in uterine leiomyosarcoma
- Review the treatment and management of the early stages of endometrial stromal sarcoma

Module 25. Uterine Sarcoma II

- Identify and classify the different anatomopathological forms of uterine sarcoma
- Identify the risk factors associated with the development of a uterine sarcoma
- Review the different clinical manifestations of uterine sarcomas and the use of magnetic resonance in the diagnosis procedures
- Classify the uterine sarcomas accorsing the the internetioanl FIGO classification model
- Gain up-to-date knowledge on the management of recurrent or metastatic disease in uterine leiomyosarcoma
- Analyze the management of recurrent endometrial stromal sarcoma
- Study the treatment of a metastatic disease and the prognostic factors of an endometrial stromal sarcoma
- Review the treatment and management of the early stages of undifferentiated endometrial sarcoma

Module 26. Rare Gynecologic Tumors

- Identify the different types of less common genital tumors and the corresponding treatment and evolution
- Revise the clinical manifestations and diagnosis of vaginal cancer
- Review the different histological types and classify the different types of vaginal cancer
- Evaluate and create an appropriate diagnostic and management plan for vaginal cancer
- Establish the follow-up plan for vaginal cancer to be able to detect and recurrences
- Identify the prognosis for each type of vaginal cancer
- Review the epidemiology of gestational trophoblastic disease and the clinical features of hydatidiform mole
- Study the clincial characteristic of gestational trophoblastic neoplasia
- Appropriately evaluate the different forms of gestational trophoblastic disease with imaging techniques
- Gain up-to-date knowledge of the histologic shapes of molar and invasive forms
- Appropriately perform staging of placental invasive disease
- Study the different types of surgical treatment suitable for treating the different forms of molar disease in pregnancy
- Recognise and implement the most appropriate methods for follow-up treatment of molar disease in pregnancy
- Appropriately classify the prognosis of gestational trophoblastic disease
- Identify and assess the different tumors that can metastasize in the female genital tract
- Study the way to deal with metastasized cancers in the genital tract
- Analyze and treat neuroendocrine tumors in the female genital tract
- Review the way to deal with tumors of the rectovaginal septum, as well as symptomatology associated with gynecological tumors
- Evaluate the pain, the different types and the treatment of these types of tumors
- Assess the presence of ascites in the context of gynecologic tumors in an appropriate way
- Classify edema and manage it appropriately
- Identify deep vein thrombosis and evaluate the most appropriate anticoagulant treatment for each case

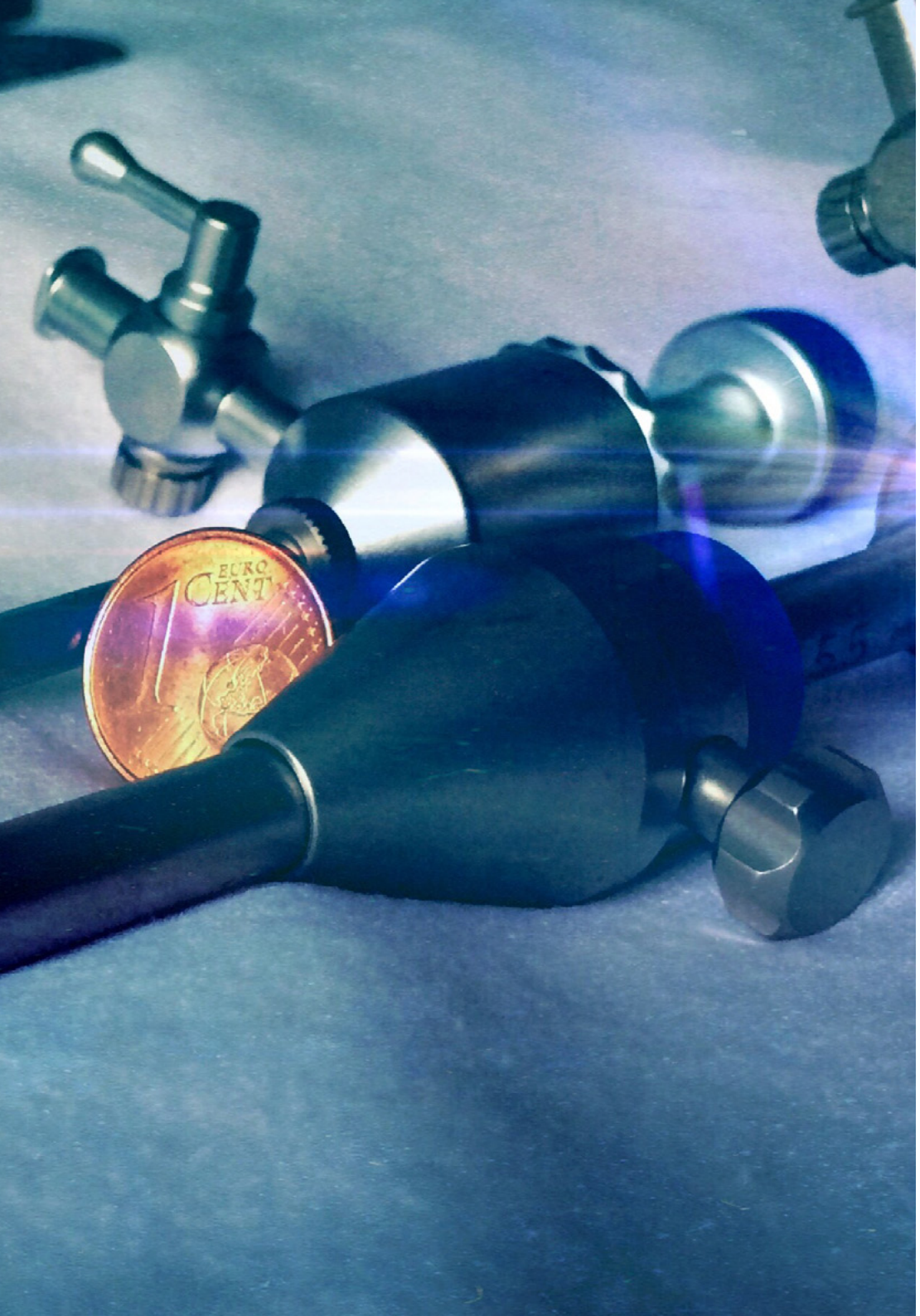
Module 27. Fertility Preservation in Gynecologic Oncology

- Determine the different fertility preservation techniques in young patients and their oncological implications
- Identify the options for preserving fertility in gynecologic cancer, as well as gamete preservation
- Revise the surgical techniques for preserving fertility in each of the cancers affecting the female genital tract
- Update on the management of pregnant patients with gynecologic cancer
- Review new options for preserving ovarian tissue

- Gain up-to-date knowledge on the current status of uterine transplantation and the most recent results obtained to date

Module 28. Endoscopic Surgery in Gynecologic Oncology

- Acquire up-to-date knowledge of exploratory laparoscopy for gynecologic cancer
- Foresee the possible oncologic complications due to the specific endoscopic technique used
- Describe the main characteristics of port of entry metastases
- Know the effect of mobilizers and pneumoperitoneum in gynecological cancer
- Acquire up-to-date knowledge of the lymphadenectomy procedures in the gynecological context
- Acquire up-to-date knowledge of the procedures involved in the specific technique of systematic transperitoneal and extraperitoneal para-aortic lymphadenectomy
- Select which type of laparoscopy should be used for inguinal lymphadenectomy
- Acquire up-to-date knowledge of the applications of endoscopy in ovarian, cervical and endometrial cancer
- Acquire up-to-date knowledge of the procedures involved in specific techniques, such as laparoscopic trachelectomy and parametrectomy in the context of cervical cancer
- Acquire up-to-date knowledge of sentinel lymph node application procedures in endoscopy and gynecology
- Identify the different types of tracers and fluorescence
- Explain the technique for pelvic exenteration using laparoscopy
- Acquire up-to-date knowledge of the procedures involved in minimally invasive surgery for recurrences of different gynecologic cancers
- Acquire up-to-date knowledge of the procedures involved in laparoscopic management of borderline ovarian tumors
- Acquire up-to-date knowledge of the procedures involved in laparoscopic management of lymph node recurrences in genital cancer



Module 29. Stress and Its Impact on Fertility

- Describe the peculiarities of endoscopy and its use in pregnant patients
- Update the procedures used in tubal recanalization techniques
- Identify the different uses of endoscopy in relation to the fertility of patients
- Acquire up-to-date knowledge of the literature on the effects of endoscopy on fertility

Module 30. Introduction. Anatomy. Physiology. Cellular Cycle

- Study the developments and advances throughout the history of Reproductive Medicine
- Examine the aspects related to female and male anatomy, in addition to those related to gametogenesis and oocyte fertilization by the spermatozoon
- Delve into the anatomy and embryology related to embryonic genesis and embryo implantation

Module 31. Gamete Interaction Fertilization Embryonic Development

- Differentiate the different reproductive techniques: ovulation stimulation, artificial insemination and In Vitro Fertilization with or without sperm microinjection
- Detail the indication of the different reproductive techniques
- Understand the possibility of using reproductive techniques with donor gametes
- Know the different adjuvant treatments that could be used in patients diagnosed with low ovarian reserve
- Manage the different types of ovulation induction according to the patient's profile
- Know the usual artificial insemination and vitro fertilization cycles

Module 32. Study of the Female Factor Role of Surgery in Reproduction

- Study the possible relationship with tubal factor sterility and infertility
- Deepen in the histological, immunological and microbiological endometrial changes and in the current techniques for their evaluation
- Basic study of ovarian reserve
- Distinguish the factors that can affect female reproductive capacity at the level of decreased ovarian reserve
- Understand tubal patency assessment techniques

Module 33. Andrology Laboratory

- Deepening the basic study at the male level
- Interpret normal values of a semen analysis
- Know the factors that may affect male reproductive capacity in terms of sperm quality, motility, morphology, aneuploidy or sperm DNA fragmentation
- Deepen the current specific studies for male factor, as well as advanced techniques
- Develop the indications for testicular biopsy and its procedure

Module 34. Reproductive Treatments Medication. Stimulation Protocols

- Manage the different drugs used in ovulation stimulation
- Know the different stimulation protocols according to the patient's characteristics
- Develop IVF/ICSI techniques (micromanipulation) from the beginning: SUZI, PZD, ROSI, ELSI, IMSI, PICSI, assisted hatching
- Explore culture media composition and requirements as a function of embryonic developmental stage
- Study embryo development and specific classification of embryo quality according to stages
- Deepen in time-lapse technology and the different kinetic events affecting embryo division
- Study the automatic algorithms presented by each time-lapse technology and relate them to the reproductive results
- Develop additional techniques in the laboratory that allow a possible improvement in embryo implantation (collapse, hatching)

Module 35. Micromanipulation Techniques

- Understand the need to establish general and specific quality indicators for each laboratory in order to maintain the best conditions in the laboratory
- Study the impact of fibroids on fertility
- Analyze the possible surgical indications in patients with fibroids and infertility
- Delve deeper into the impact of uterine malformations on fertility
- Analyze the possible surgical indications in patients with surgical malformations and infertility Metroplasties Septoplasties
- Understand the role of tubal surgery in improving natural fertility
- Develop the surgical option of uterine transplantation, its indications and technique

Module 36. Gamete and Embryo Cryopreservation

- Study the indications of the "freeze all"
- Know and manage the possible complications derived from assisted reproduction treatments
- Analyze the drugs used for the endometrial preparation of substituted embryo cryotransfer cycles
- Update the different luteal phase support protocols
- Develop gamete handling in the laboratory
- Know the embryo biopsy techniques according to the stage of embryo division

- Know the embryo biopsy techniques according to the technology used and the existing means in each laboratory
- Analyze the indications for fertility preservation in the male
- Study the techniques used in sperm cryopreservation and their efficiency
- Deepen the indications for fertility preservation in women
- Know the techniques used in oocyte cryopreservation and their efficiency
- Know the techniques used in ovarian tissue cryopreservation and their efficiency

Module 37. Fertility Preservation

- Study the European standards to establish the minimum criteria required in Reproduction Units (ISO/UNE)
- Study in depth the definitions and indications for the study of the couple with repeated miscarriages or implantation failures
- Develop the level of evidence for each of the requested tests
- Gain knowledge the different treatment options
- Study the impact of endometriosis on fertility
- Analyze the possible surgical indications in patients with endometriosis and infertility
- Know the impact of adenomyosis on fertility
- Develop possible surgical indications in patients with adenomyosis and infertility
- Understand the impact of the hydrosalpinx on fertility and its surgical indication prior to In Vitro Fertilization

Module 38. Genetics in Reproduction

- Study the basic concepts of genetics
- Develop the basic concepts of reproductive genetics
- Analyze the concept of "epigenetics" and its influence on reproduction
- Know the different genetic diagnostic techniques, existing platforms and application of each of them according to the diagnostic objective
- Analyze the indications in reproductive medicine for diagnosis and screening of aneuploidy
- Interpret the results of genetic studies
- Understand the need for genetic counseling
- Knowledge of embryo biopsy techniques
- Study the results of the preimplantation genetic diagnosis and aneuploidy screening program

Module 39. Legislation Quality Research and Future Techniques

- Know the Spanish legislation on Assisted Reproduction Techniques and its evolution throughout history
- Know the legislation in other surrounding countries
- Develop new techniques in genetic diagnosis (non-invasive tests, mitochondrial transfer) and their possible future applications

03

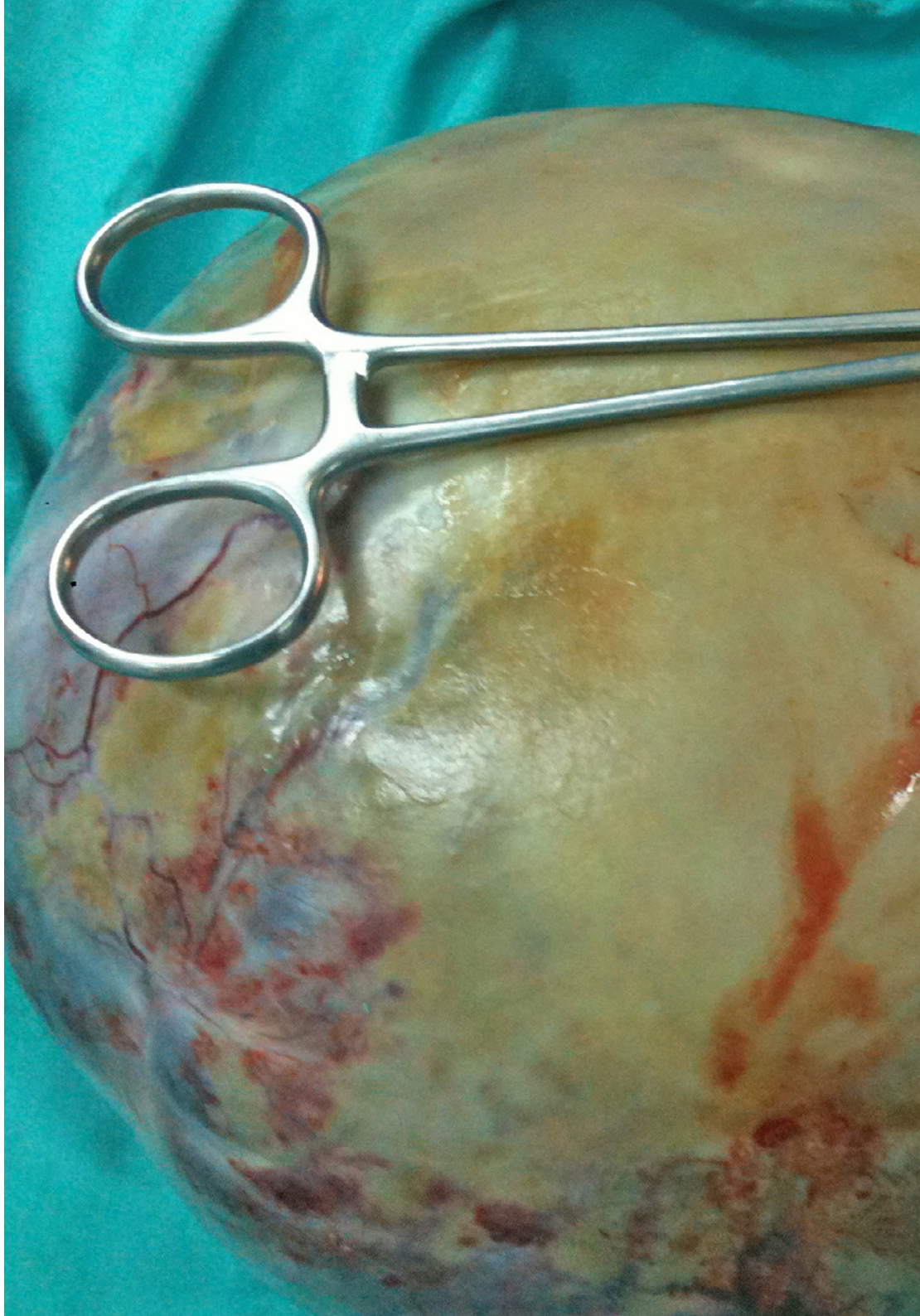
Skills

After passing the assessments of the Advanced Master's Degree in Gynecologic Pathology and Assisted Reproduction, the professional will have acquired the skills required to operate in this field, with the confidence and reliability of the best scientific and technical update. This qualification will translate into a high-quality practice that will have a direct impact on patient care and on the professional positioning of the student, who will become a highly valuable professional figure for any organization.

At the end of this Advanced Master's Degree in Gynecologic Pathology and Assisted Reproduction, you will be able to integrate each and every one of the aspects that you will learn in the program, thanks to the help and guidance of the best experts in the online teaching panorama"

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 field of study
- Integrate knowledge and face the complexity of making judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments
- Know how to communicate conclusions, knowledge, and supporting arguments to specialized and non-specialized audiences in a clear and unambiguous way
- Acquire the learning skills that will enable further studying in a largely self-directed or autonomous manner
- Acquire up-to-date concepts in anatomy, physiology, embryology and genetics, which will help to understand reproductive diagnostics and treatments
- 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
- Know how to apply acquired knowledge and problem-solving skills in new or unfamiliar environments within broader (or multidisciplinary) contexts related to the field of study
- Integrate knowledge and face the complexity of making judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments
- Know how to communicate conclusions, knowledge, and supporting arguments to specialized and non-specialized audiences in a clear and unambiguous way



Specific Skills

- Know the general application of laparoscopy in gynecologic surgery for both benign and malignant processes
- Establish the basis of electrosurgery for its application in the field of endoscopy
- Determine the learning needs and carry out a specialized educational program using all the resources available for the study of endoscopy
- Perform adequate training in endoscopic suturing
- Develop an exhaustive knowledge of the visceral and accessory anatomy of the female pelvis and abdomen to apply it in the operating room
- Diagnose and treat benign uterus and appendage pathology involving the female genital tract with minimum invasion
- Identify and classify the different types of endometriosis in order to treat them with minimally invasive surgery
- Determine the epidemiology and main characteristics of pelvic floor processes in women and how to treat them with or without meshes
- Establish the diagnostic and treatment procedures for the different types of cancer affecting women based on the latest advances in gynecologic oncology
- Describe the endoscopic surgical procedures related to different types of cancers affecting women
- Adequately manage gynecologic tumor recurrences
- Identify endoscopic surgery complications and their intraoperative and postoperative management
- Describe the biological basis of oncology procedures
- Identify the various chemotherapeutic agents, their mechanism of action and their use in the treatment of gynecologic cancers
- Identify and classify the different types of cancer found in the female reproductive system
- Determine the epidemiology and principal characteristics of oncology processes in women
- Establish the diagnostic and treatment procedures for the different types of cancer affecting women based on the latest advances in gynecologic oncology
- Identify the signs and symptoms specific to uterine sarcoma and the latest diagnostic and therapeutic procedures used to address them
- Describe the surgical procedures related to the different types of cancers affecting women
- Know ways in which to adequately preserve the fertility of a woman with cancer
- Identify new research paths and literature updates on gynecologic oncology
- Identify the signs and symptoms specific to uncommon tumors in women and highlight the latest diagnostic and therapeutic procedures used to address them
- Implement the correct form of medical practice to care for a dying patient, in accordance with the latest scientific evidence
- Highlight the main pathologies associated with eating disorders and the actions aimed at their prevention and treatment
- Understand in detail the aspects related to the initial assessment of a sterile couple. Study criteria and referral to Reproduction Units. Basic clinical examination, request and interpretation of the results of complementary tests
- Perform an appropriate assessment and clinical orientation of the couple. Indication of request for specific tests based on the above findings

04

Course Management

The teaching staff of this Advanced Master's Degree is one of its fundamental values. Handpicked from among the best in the industry, they form a group of renowned experts who know not only the theoretical aspects of this type of work, but also each and every one of its aspects and the different situations in which professionals may find themselves. Additionally, other recognized specialists participate in its design and preparation, which means that the program is developed in an interdisciplinary manner. A team of top-level professionals who will be your allies to help you make the leap to reach the highest level of competence in your profession.

An impressive team of teachers, chosen for their exceptional medical, scientific and teaching quality, coming from different areas of expertise, will be your teachers during the program: a unique opportunity not to be missed".

International Guest Director

Dr. Michael Grynberg is a prominent Obstetrician-Gynecologist whose research in Reproductive Endocrinology, Infertility and Andrology has achieved international impact. Likewise, this specialist has been a pioneer in fertility preservation in oncology patients. His avant-garde studies in this field have allowed people facing aggressive medical treatments to maintain options to preserve their reproductive capacity.

Thanks to his extensive knowledge in this scientific area, Dr. Grynberg participated in the foundation of the French Oncofertility Society and later became its elected president. At the same time, he directs the Department of Reproductive Medicine and Fertility Preservation at the Antoine-Béclère University Hospital Center. At the same time, he is a member of the Reproductive Endocrinology Group of the European Society of Human Reproduction and Embryology (ESHRE). In addition, he runs the National College of Obstetricians-Gynecologists (CNGOF) in his country.

He has also published 3 books and accumulated more than 350 scientific publications in journals and conference presentations. In them he has addressed topics ranging from in vitro oocyte maturation in case of ovarian resistance, to investigating the role of ZO-1 in the differentiation of human placental trophoblast cells. Another of his contributions has been the description of the Follicular Outflow Rate (FORT) as a means to evaluate the sensitivity of follicles to FSH hormone. He is also the author of a disruptive proposal based on intraovarian administration of AMH to prevent follicular loss and fertility impairment after cyclophosphamide administration.

In terms of competency development, Dr. Grynberg has sustained intensive academic updating. He completed his specialization at the Lariboisière Faculty in Paris and, in turn, has a training stay at the Center for Reproductive Medicine of the New York Presbyterian Hospital.

Dr. Grynberg, Michael

- Director of Reproductive Medicine at the Antoine-Béclère Hospital Center, Paris, France
- Head of the Department of Reproductive Medicine-Fertility Preservation at the Jean-Verdier de Bondy Hospital
- Director of the French National College of Obstetricians and Gynecologists
- President of the French Society of Oncofertility
- Doctor of Medicine at the Lariboisière Faculty in Paris
- Fellowship at the Center for Reproductive Medicine, New York Presbyterian Hospital
- Member of: European Society of Human Reproduction and Embryology (ESHRE)

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

International Guest Director

Dr. Allan Covens is an international eminence in the field of **Gynecologic Oncology.** Throughout his distinguished professional career, the Postgraduate Diploma has investigated **germ cell tumors**, **Gestational Trophoblastic Disease, Cervical Cancer**, as well as radical and reconstructive surgical techniques. In particular, he is a reference for his medical innovations that, after different types of surgeries, aim at preserving the fertility of patients. Thanks to these contributions, he has accumulated more than 32 awards and grants.

In addition, this eminent specialist has performed **live interventions in several continents,** also taking his medical contributions to nearly 30 countries around the world through lectures. He is also the **author of more than 135 peer-reviewed publications** and has participated in 16 textbooks on Gynecologic Oncology. Another of his works is a DVD/book on **advanced laparoscopic techniques** in this field of women's health.

In turn, Dr. Covens has chaired the **Division of Gynecologic Oncology at the University of Toronto and Sunnybrook Health Sciences Centre.** At the latter institution, he directed his fellowship to train potential scientists for 13 years. He also serves on the board of the Global Curriculum Review Committee and coordinates the Rare Tumor Committee. He is also a member of MAGIC, a **multidisciplinary team developing protocols for malignant germ cell tumors.**

In addition, this distinguished scientist is on the **editorial board of the journal Cancer** and reviews articles for **Lancet Oncology, Gynecologic Oncology, International Journal of Gynecologic Cancer,** among many other specialized publications.

Dr. Covens, Allan

- Director of the Division of Gynecologic Oncology at the University of Toronto
- Advisor to Moi University, Eldoret, Kenya
- Past President of the International Gynecologic Cancer Society (IGCS)
- Advisor to the Editorial Board of the journal Cancer
- Specialist in Obstetrics and Gynecology from the University of Western Ontario
- Medical Degree from the University of Toronto
- Research Fellowship in Gynecologic Oncology at the University of Toronto/McMaster's Degree in Gynecologic Oncology
- Member of: Rare Tumor Committee, Gynecology, Cervical and Gestational Trophoblastic Committee of the NRG Postgraduate Certificate in Treatment and Management of Uterine Sarcoma

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

International Guest Director

As one of the pioneer surgeons in Brazil by introducing advanced techniques of**Laparoscopic Oncologic Surgery**in Paraná, Dr. Reitan Ribeiro is one of the most prolific figures in this specialty. So much so that he has even received recognition as **an honorary citizen** of the city of Curitiba, highlighting his work in the creation and development of the technique of **Uterine Transposition.**

The IJGC, International Journal of Gynecologic Cancer, has also recognized the outstanding work of Dr. Reitan Ribeiro. His publications on **Uterine Robotic Transposition in Cervical Cancer,** Uterine Transposition after Radical Trachelectomy and directed research in the technique of Uterine Transposition for patients with gynecological cancers who want to preserve fertility are highlighted. He has received the **national award for medical innovation** for his research in the field of Uterine Transposition, highlighting these advances in the preservation of the patient's fertility.

His professional career is not without success, as he holds **numerous positions of responsibility**in the prestigious Erasto Gaertner Hospital. He directs the research program in Gynecologic Oncology of this center, being also director of the Fellowship program in this specialty, in addition to coordinating the training program in Robotic Surgery focused on Gynecologic Oncology.

At the academic level, he has completed internships at numerous prestigious centers, including Memorial Sloan Kettering Cancer Center, McGuill University and the National Cancer Institute of Brazil. He balances his clinical responsibilities with consulting work for leading medical and pharmaceutical companies, mainly Johnson & Johnson and Merck Sharp & Dohme.

Dr. Ribeiro, Reitan

- Research Director, Gynecologic Oncology Department - Erasto Gaertner Hospital - Brazil
- Director of the Fellowship Program in Gynecologic Oncology at the Erasto Gaertner Hospital
- Director of the Robotic Surgery Training Program of the Gynecologic Oncology Oncology Department of the Erasto Gaertner Hospital
- Senior Surgeon in the Department of Gynecologic Oncology, Erastus Gaertner Hospital
- Director of the Resident Oncologist Program at the Erasto Gaertner Hospital
- Consultant at Johnson & Johnson and Merck Sharp & Dohme
- Degree in Medicine at the Federal University of Porto Alegre
- Fellowship in Gynecologic Oncologic Surgery at Memorial Sloan Kettering Cancer Center
- Fellowship in Minimally Invasive Surgery, McGuill University
- Internships at Governador Celso Ramos Hospital, National Cancer Institute of Brazil and Erasto Gaertner Hospital
- Certification in Oncologic Surgery by the Oncologic Surgery Society of Brazil

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Management

Dr. Iniesta Pérez, Silvia

- Coordinator the Reproduction Unit of Hospital Universitario
- Degree in Medicine and Surgery from the University of Alcalá, Madrid
- Specialist in Obstetrics and Gynecology, via MIR. Santa Cristina University Hospital, Madrid
- Doctorate Courses at the Autonomous University of Madrid
- Research Sufficiency in the Department of Obstetrics and Gynecology, Universidad Autónoma de Madrid, Qualification: Outstanding
- Doctoral Thesis, Obstetrics and Gynecology epartment, Autonomous University of Madrid Oustanding- Cum Laude
- Levels I, II, III and IV obstetric-gynecological ultrasound (SESEGO accreditation)
- Master's Degree in Human Reproduction IVI
- Master's Degree in Genomics and Medical Genetics 2nd edition, Granada University
- Online Master's Degree in Minimally Invasive Surgery in Gynecology. CEU Cardenal Herrera University
- Masterclass Patient-Centered Clinical Management. Deusto Business School, Madrid
- Area Specialist Doctor at the Santa Cristina University Hospital, Madrid
- Interim Labor Doctor, Hospital Infanta Sofía, Madrid
- Physician on Secondment at the La Paz 6 University Hospital

Dr. Franco Iriarte, Yosu

- Laboratory and scientific director, International Ruber Hospital
- Head of the Assisted Reproduction Laboratory of the Virgen del Pilar Health Centre in San Sebastián
- Head of the Assisted Reproduction Laboratory of Policlínica Guipúzcoa, including the laboratory of Clínica del Pilar
- Collaboration with the Assisted Reproduction Center, Navarro Medical Center
- Senior Embryologist at Cornell University Hospitals of New York and RMA of New Jersey
- Creation of the company Donostia Basque Institute of Fertility located in Onkologikoa. Managing Director
- Managing Director of the Donostia Basque Institute of Fertility
- Graduate in Biology, University of Navarra (Fundamental and Health Specialty)
- CAP Qualification (Certificate of Pedagogical Competency)
- PhD in Science from the University of Navarra. Thesis Title: "Genetic risk factors for venous thrombosis"
- University Specialist in Assisted Reproduction: Psychological and Legal Aspects from the Complutense University of Madrid
- Discussion Table Moderator of the North Forum Reproduction Units on embryonic and oocyte morphological criteria and embryo freezing
- University Diploma in Nursing. UPV-EHU "Donostia School of Nursing" Donostia- San Sebastián
- Master's Degree in "Genetic Counseling". San Pablo University CEU in Madrid

Professors

Ms. Sotos Borrás, Florencia

- Graduate in Biological Sciences. Specialist in Biochemistry and Molecular Biology. Autonomous University of Madrid
- Radioactive Facilities Supervisor Certification, Specialty in Biomedicine and Research. Infocitec
- IVF-Genetics-Andrology at Ruber Internacional Hospital

Ms. Villa Milla, Amelia

- Senior Embryologist in the Assisted Human Reproduction Laboratory at Ruber Internacional Hospital, Madrid
- Degree in Biological Sciences and Specialist in Biochemistry and Molecular Biology. Autonomous University of Madrid
- Biologist Specialist in Clinical Analysis in the Area of Genetics. Official Biologists College

Dr. Cuevas Saiz, Irene

- Accredited by the ASEBIR as a Specialist in Assisted Human Reproduction Clinical Embryology
- Official Master's Degree in Biotechnology of Assisted Human Reproduction, University of Valencia
- Master's Degree in Human Reproduction
- Doctoral Candidate in Obstetrics, Gynecology and Regenerative Medicine, Research Plan Title: "Embryo selection by non-invasive techniques: combining morphology

Dr. Sole Inarejos, Miquel

- Senior Embryologist of the In Vitro Fertilization Laboratory and Head of the Cryobiology Department, Dexeus University Hospital
- Degree in Biology and Biochemistry
- D. in Cell Biology, Autonomous University of Barcelona

Dr. Fernández Díaz, María

- Director of Ergo Clinic and responsible for the Assisted Reproduction Department
- Degree in Biochemistry. Faculty of Medicine and Health Sciences, University of Oviedo
- Degree in Chemistry. Faculty of Chemical Medicine, University of Oviedo
- PhD student in Molecular and Cellular Biology. University of Oviedo
- Official Master's Degree in Reproductive Biology and Technology University of Oviedo
- Master's Degree in Cancer Research University of Oviedo
- Postgraduate Degree in Medical Genetics. University of Valencia

Dr. Gayo Lana, Abel

- Co-Director of the ERGO Clinic. Embryology Laboratory Director
- Doctor in Biology (outstanding Cum Laudem), PhD Program in Biochemistry and Molecular Biology, Department of Functional Biology, University of Oviedo
- Master's Degree in Human Reproduction, Spanish Fertility Society (SEF) and Complutense University of Madrid
- Degree in Biology. Faculty of Biology Medicine, University of Oviedo
- Official Degree: Senior Embryologist of ESHRE
- ASEBIR Certification in Assisted Human Reproduction. Clinical Embryology

Dr. Costa Borges, Nuno Luis

- Chief Scientific Officer and co-founder of Embryotools
- Clinical Embryologist, Valencian Institute of Infertility (IVI), Barcelona
- Assistant Professor, Autonomous University of Barcelona, Department of Cellular Biology
- Graduate in Biochemistry, University of Coimbra, Portugal
- D. in Cell Biology, Autonomous University of Barcelona

Dr. Carrillo de Albornoz Riaza, Elena

- Medical Director of the Reproduction Unit, Ruber International Hospital
- Gynecologist of the Gynecology and Obstetrics Service of Dr. Jiménez Ruiz's team at Ruber International Hospital
- Specialist in the Obstetrics and Gynecology Service, Del Aire University Hospital
- Honorary collaborator of the Department of Obstetrics and Gynecology, Faculty of Medicine, Complutense University of Madrid
- Degree in Medicine and Surgery from the Faculty of Medicine at the Complutense University of Madrid
- Specialist in Gynecology and Obstetrics issued by the Ministry of Education and Science
- Doctorate, Autonomous University of Madrid

Dr. Vegas Carrillo de Albornoz, Ana

- Medical Specialist in Obstetrics and Gynecology, Ruber International Hospital
- Assistant Physician in the Obstetrics and Gynecology Shift Team, Hospital Ruber International
- Medicine Graduate from the Faculty of Medicine of the Complutense University of Madrid
- PhD in Medical and Surgical Sciences, Universidad Complutense de Madrid
- Master's Degree in Human Reproduction, Complutense University of Madrid

Dr. Fernández Prada, Sara

- Specialist in the Human Reproduction Section, La Paz University Hospital, Madrid
- Doctor specialized in Obstetrics and Gynecology
- Master's Degree in Assisted Reproduction from Rey Juan Carlos University

Dr. Gay, Rosina

- Senior Embryologist in the Assisted Reproduction Laboratory, Ruber International Hospital
- Biologist in the Genetics and IVF Laboratory Clinic
- Biologist in the Genetics, IVF and Clinical Analysis laboratories, Madrid Institute of Integral Gynecology
- Degree in Biological Sciences with a major in Biochemistry, Complutense University of Madrid

Dr. Messeguer, Marcos

- Scientific Supervisor at IVI Team
- Senior Embryologist at IVI Valencia
- Professor of Biotechnology, University of Valencia
- Degree in Biological Sciences, University of Valencia
- D. cum laude in Biological Sciences and European Doctorate
- Master's Degree in Research Methods; Design and Statistics, Autonomous University of Barcelona

Dr. Hurtado de Mendoza, María Victoria

- Head of Quality Control of the IVF Laboratory and Senior Clinical Embryologist at Caremujer SL
- Responsible for the design and start-up of the first IVF laboratory in Andalusia
- Senior Clinical Embryologist at MásVidaReproducción, in Seville, Spain
- Medical Specialist in the Cell Culture Genetics and Cytogenetic Analysis Unit, Puerta del Mar University Hospital, Cadiz
- Degree in Biological Sciences, University of Seville, Spain
- Doctorate from the Faculty of Biology, University of Seville

Dr. Alcaide Raya, Antonio
- CTO and co-founder of Assacell Biologist
- Partner, senior embryologist and cofounder of Reprofiv
- Senior Embryologist in charge of the Andrology and Embryology Laboratory at FIV Center Madrid
- Graduate in Biology, Complutense University of Madrid
- Specialist in Genetic Medicine, University of Alcalá de Henares, Madrid
- Master's Degree in Biological and Embryological Development, University of Valencia

Dr. Horcajadas, José A
- Founder of HoMu invest and Fullgenomics
- Scientific Director at Overture Life
- Consultant, scientific director and founder of SINAE Scientific Consulting in Seville, Spain
- Professor of Genetics, Pablo de Olavide University of Seville, Spain
- Research Professor, Eastern Virginia Medical School, Norfolk, Virginia
- Degree in Molecular Biology and Biochemistry, Autonomous University of Madrid
- D. in Biological Sciences, Autonomous University of Madrid

Dr. Eguizabal Argaiz, Cristina
- Head Researcher, Basque Transfusion and Human Tissue Center (CVTTH)
- Senior Researcher, Center for Regenerative Medicine, Barcelona, Spain
- Postdoctoral Research Fellow at The Gurdon Institute, University of Cambridge
- Degree in Biology, Fundamental Biology with a major in Microbiology, University of Navarra
- D. in Cell Biology, University of the Basque Country

Dr. Vendrell Montón, F. Xavier
- Head of the Reproductive Genetics Unit of Sistemas Genómicos SL
- Responsible for reproductive genetic counseling and preconception at the Valencian Institute of Genetics
- Staff Biologist, Balearic Infertility Institute in Palma de Mallorca
- Degree in Biological Sciences, University of Valencia
- Ph.D. in Biological Sciences with Cum Laude distinction, University of Valencia

Dr. Sáez de la Mata, David
- Assistant physician of the Assisted Reproduction Unit of the Infanta Sofía University Hospital of the Community of Madrid
- Physician of the Assisted Reproduction Unit of Ginemed Madrid Center
- Degree in Medicine from the University of Alcalá de Henares
- Master's Degree in Contraception and Sexual and Reproductive Health
- Master's Degree in Human Reproduction IVI
- Expert in Gynecological Exploration and Mammary and Vulvar Pathology
- Expert in Uterine Pathology, Menopause and Reproduction
- Expert in Obstetric Diagnosis and Pathology and Expert in Childbirth, Puerperium and Lactation by the Institute of Continuing Education of the University of Barcelona

Dr. Fernández Pascual, Esaú
- Member of the Spanish Association of Urology
- Andrology and Sexual Medicine at the La Paz University Hospital
- Degree in Medicine from the Autonomous University Madrid
- Co-Editor-in-Chief of the International Journal of Andrology

Dr. Bescós Villa, Gonzalo
- Biologist at the Universidad Autónoma De Madrid
- Master's Degree in Genetics and Cell Biology, Interuniversity: Complutense University of Madrid, Autonomous University of Madrid and University of Alcalá de Henares
- Final thesis in luisa maria botella's group, Center for Biological Research of the Higher Council for Scientific Research
- Internship in Maria Blasco's group, National Oncology Research Center, Spain
- Extracurricular internship in the genetics department of the Ruber International Hospital

Dr. Escribá Pérez, María José
- Clinical Embryologist at IVIRMA-Valencia's In Vitro Fertilization Laboratory
- PhD in Biology from the Polytechnic University of Valencia
- Researcher in the area of reproductive biotechnologies

Dr. Duarte Perez, Manuel
- Specialist in the Reproduction Section and in the Obstetrics and Gynecology Service of the La Paz University Hospital
- Master's Degrees in Human Reproduction (IVI-University of Valencia/ADEIT) and in Gynecological Endoscopic Surgery by IVI-University of Valencia/ADEIT
- Master's Degree in Human Reproduction by IVI-University of Valencia/ADEIT

Dr. Armijo, Onica
- Assistant Specialist in Gynecology and Obstetrics at La Paz Hospital Human Reproduction Unit
- Professor of the Faculty of Medicine of the UAM

Dr. García, Myriam
- Attending Physician at La Paz University Hospital
- Graduate in Medicine and Surgery from the University of Seville
- Felowship Gynecologic Oncology accredited by ESGO
- Internal Medical Specialist at the Virgen del Rocío University Hospital in Seville

Dr. Sánchez Hernández, María José
- Specialist in Obstetrics and Gynecology at the Reproduction Unit of Hospital Universitario La Paz, Madrid

Dr. Silva Zaragüeta, Patricia
- Specialist in Obstetrics and Gynecology at La Paz University Hospital
- Specialty in Reproductive Medicine at La Paz University Hospital
- PhD in Medicine and Surgery from the Autonomous University of Madrid

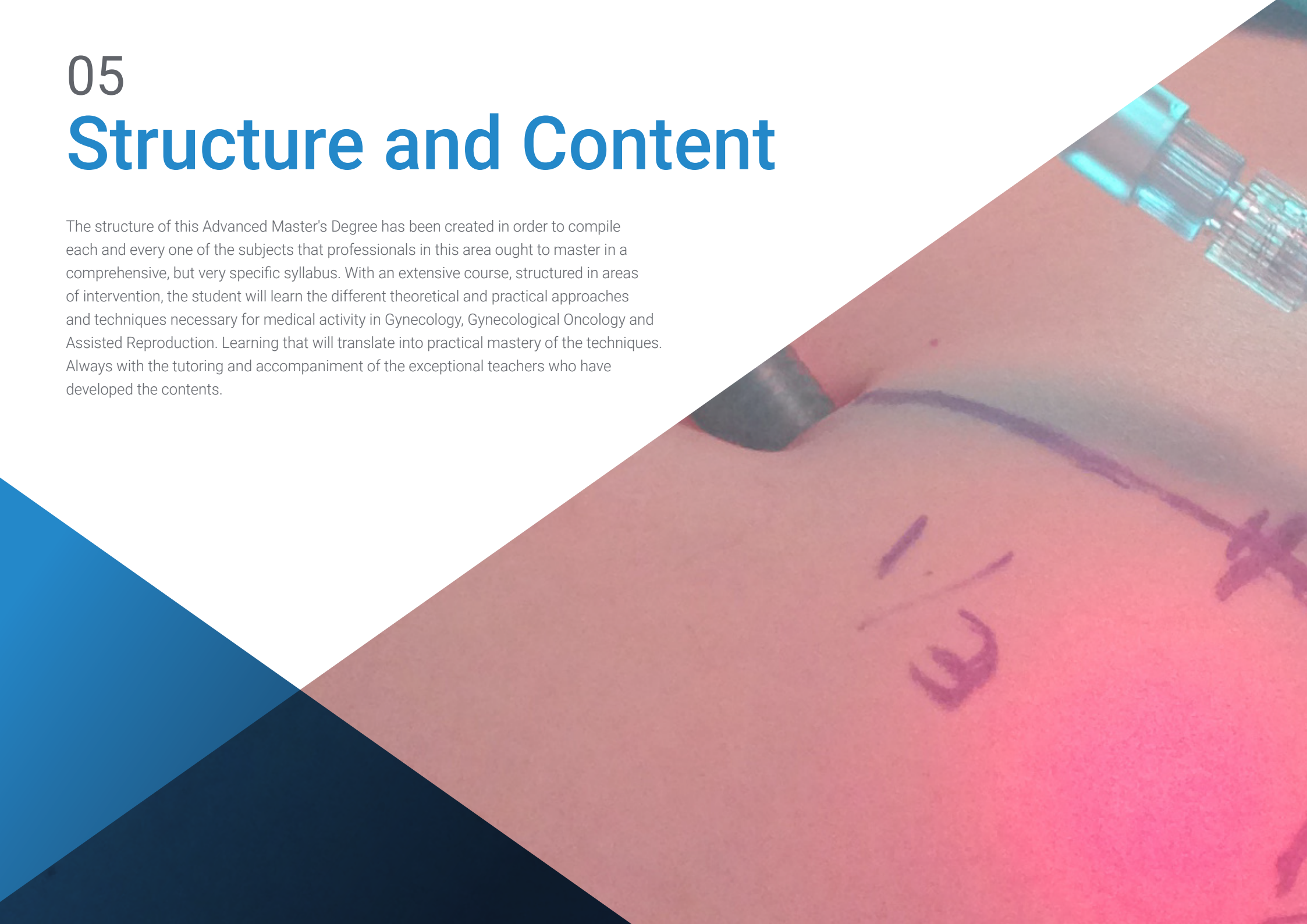
Dr. Álvarez Álvarez, Pilar
- Gynecology and Obstetrics Area Specialist at Infanta Sofia University Hospital
- PhD in Gynecology and Obstetrics from the Autonomous University of Madrid
- Professor of Health Sciences at the European University of Madrid
- Master's Degree in Human Reproduction from Rey Juan Carlos University

Ms. Carmen Cañadas, María
- Biologist in the IVF laboratory and coordinating the genetic counselling department at Ginefiv
- Lecturer in the area of genetics and assisted reproduction

05

Structure and Content

The structure of this Advanced Master's Degree has been created in order to compile each and every one of the subjects that professionals in this area ought to master in a comprehensive, but very specific syllabus. With an extensive course, structured in areas of intervention, the student will learn the different theoretical and practical approaches and techniques necessary for medical activity in Gynecology, Gynecological Oncology and Assisted Reproduction. Learning that will translate into practical mastery of the techniques. Always with the tutoring and accompaniment of the exceptional teachers who have developed the contents.



This Advanced Master's Degree is an incomparable opportunity to obtain, in a single program, all the necessary knowledge in the areas of Gynecological Pathology and Assisted Reproduction"

Module 1. Female Surgical Anatomy

1.1. Anatomy of the Abdominal Wall
1.2. Musculo-Fascial Anatomy of the Female Pelvis
1.3. Visceral System of the Upper Abdomen
  1.3.1. Diaphragm
  1.3.2. Liver
  1.3.3. Omentum and Spleen
  1.3.4. Small Intestine, Large Intestine, and Stomach
  1.3.5. Rest of Organs in Upper Abdomen
1.4. Pelvic Visceral System
  1.4.1. Uterus and Ovaries
  1.4.2. Recto and Sigma
  1.4.3. Bladder and Ureters
1.5. Abdomino-Pelvic Vascular System
1.6. Abdominal and Pelvic Nervous System
1.7. Lymphatic System in Abdomen and Pelvis
1.8. Dissection and Limits of Avascular Spaces
1.9. Vascular Anomalies.
  1.9.1. Abnormalities in the Pelvic Area
  1.9.2. Corona Mortis
  1.9.3. Abdominal and Aortic Area Abnormalities
  1.9.4. Use of Preoperative Imaging Techniques
1.10. Anatomy of Vulva and Vagina
1.11. Functional Anatomy of the Pelvic Floor

Module 2. Hysteroscopic Surgery

2.1. Introduction to Hysteroscopic Surgery
2.2. Organization of an Outpatient Hysteroscopy Consultation
2.3. Hysteroscopy Equipment and Instruments in Consultation
  2.3.1. Peculiarities of the Hysteroscopy Tower
  2.3.2. Types of Diagnostic Hysteroscopes
  2.3.3. Types of Instruments
2.4. Hysteroscopy in Consultation
  2.4.1. Indications for In-Consultation Hysteroscopy
  2.4.2. In-Consultation Hysteroscopy Technique
  2.4.3. How to Increase the Success Rate?
2.5. Surgical Hysteroscopy
  2.5.1. Surgical Hysteroscopies Indications
  2.5.2. Peculiarities of the Procedure in the Operating Room
2.6. Systematic Endometrial Exploration and Biopsy
2.7. Hysteroscopic Polypectomy
2.8. Foreign Body Removal (IUD, Essures)
2.9. Hysteroscopic Myomectomy
  2.9.1. Limits to In-Consultation Interventions
  2.9.2. Types of Hysteroscopic Morcellators
  2.9.3. Suitable Techniques
2.10. Resection of Septum and Intracavitary Malformations
2.11. Intratubal Devices
2.12. Endometrial Ablation
  2.12.1. Resectoscope Use
  2.12.2. *Novasure* and Other Devices

2.13. Complications and Post-Procedural Management in Hysteroscopy
- 2.13.1. Uterine or Cervical Perforation
- 2.13.2. Infections
- 2.13.3. Vasovagal Syndrome
- 2.13.4. Bleeding
- 2.13.5. Postoperative Pain
- 2.13.6. Hyperosmolar Syndrome
- 2.13.7. Others

2.14. New Developments in Hysteroscopy
- 2.14.1. Use of Monopolar vs. Bipolar
- 2.14.2. Use of Laser in Hysteroscopy
- 2.14.3. Other Developments

Module 3. Exploratory Laparoscopy and Benign Adnexal Pathology

3.1. General Considerations in the Operating Room

3.2. Use of Veress vs. Hasson Trocar

3.3. Placement of Accessory Trocars
- 3.3.1. Choosing the Right Trocar
- 3.3.2. How to Avoid Complications?
- 3.3.3. Use of Direct Vision Trocars

3.4. Performing the Pneumoperitoneum

3.5. Systematic Exploration of the Cavity: Biopsies and Cytology

3.6. Simple Adnexectomy and Salpingectomy

3.7. Ovarian Cystectomy of Simple Cysts

3.8. Management of Complex Non-Endometriotic Cysts
- 3.8.1. Ovarian Teratomas
- 3.8.2. Large Cysts
- 3.8.3. Adnexal Torsion
- 3.8.4. Ectopic Pregnancy
- 3.8.5. Pelvic Abscess and Inflammatory Disease

3.9. Remaining Ovary Syndrome

Module 4. Benign Uterine Pathology and Dysgenesis

4.1. Laparoscopic Myomectomy
- 4.1.1. Medical Treatment of Myomas
- 4.1.2. Surgical Treatment. Indications
- 4.1.3. Prevention of Bleeding
  - 4.1.3.1. Injection of Vasoconstrictors
  - 4.1.3.2. Temporary Clipping of Uterine Arteries
- 4.1.4. Basic Surgical Techniques
  - 4.1.4.1. Choosing the Incision
  - 4.1.4.2. Myomatous Dissection and Removal
  - 4.1.4.3. Bed Suture
  - 4.1.4.4. Morcellation of the Part
    - 4.1.4.4.1. Risk of Uterine Sarcoma
    - 4.1.4.4.2. Sealed Morcellation Systems
- 4.1.5. Fertility after Myomectomy
  - 4.5.1.1. Obstetric Outcomes and Recommendations
  - 4.5.1.2. Non-Stick Systems

4.2. Laparoscopic Hysterectomy
- 4.2.1. Use of Uterine Mobilizers
  - 4.2.1.1. Types of Mobilizers
  - 4.2.1.2. Fitting the Mobilizers
  - 4.2.1.3. Advantages of Mobilizers
  - 4.2.1.4. Automatic Uterine Mobilization Systems
- 4.2.2. Basic Simple Hysterectomy Technique
- 4.2.3. Technique in Complex Situations
- 4.2.4. Vaginal Vault Suture and Dehiscence

4.3. Genital Malformation Syndromes
- 4.3.1. Classification of Malformation Syndromes
- 4.3.2. Laparoscopic Resolution of Malformation Syndromes
- 4.3.3. Laparoscopic Neovagina

Module 5. Pelvic Floor Pathology and Use of Vaginal Meshes

5.1. Pathophysiology of Genital Prolapse
5.2. Etiopathogenesis of Chronic Pelvic Pain
5.3. Global Assessment of the Patient and Route of Approach
5.4. Prosthetic Materials and Mesh Types
  5.4.1. Types of Material
  5.4.2. Meshes for Genital Prolapses
  5.4.3. Urinary Incontinence Meshes
5.5. Laparoscopic Sacrocolpopexy
  5.5.1. Choosing the Right Mesh
  5.5.2. Surgical Technique
    5.5.2.1. When to Preserve the Uterus?
  5.5.3. Technique Complications
  5.5.4. A Learning Curve
5.6. Treatment of Urinary Incontinence
  5.6.1. Pre-Operative Study
  5.6.2. Endoscopic Treatment of Incontinence
  5.6.3. Vaginal Treatment of Incontinence
  5.6.4. Placement of Mini-Slings
  5.6.5. Placement of TVT - TOT
  5.6.6. Other Procedures
5.7. Endoscopic Repair of Paravaginal Defects
5.8. Role of Cystoscopy in Gynecologic Surgery

Module 6. Laparoscopy in Endometriosis

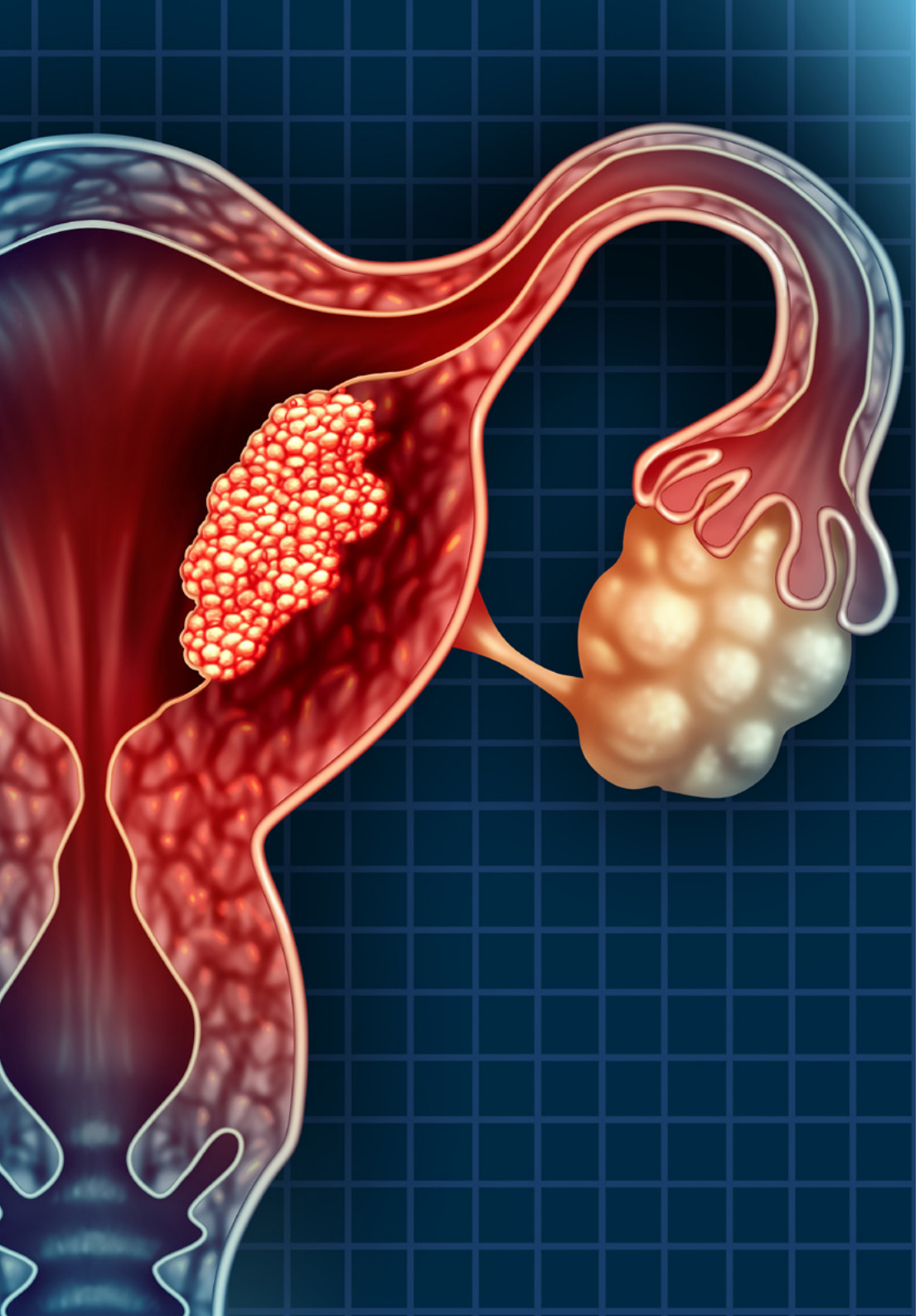
6.1. Laparoscopy in the Treatment of Endometriosis
6.2. General Diagnosis of Endometriosis
  6.2.1. Clinical Examination
  6.2.2. Imaging Techniques
  6.2.3. The Role of Tumor Markers
6.3. Endometriosis Classification
  6.3.1. Classification Systems by Authors
  6.3.2. Clinical Utility of Classifications
6.4. Medical Treatment of Endometriosis
  6.4.1. Non-Hormonal Treatment
  6.4.2. Hormonal Treatment
    6.4.2.1. Contraceptives
    6.4.2.2. Progestogens
    6.4.2.3. Danazol
    6.4.2.4. Gestrinone
    6.4.2.5. Others
6.5. Treatment of Ovarian and Peritoneal Endometriosis
  6.5.1. Types of Peritoneal Disease
  6.5.2. Adhesion Formation and Release
  6.5.3. Ovarian Endometriosis
6.6. Management of Deep Endometriosis
  6.6.1. General concepts
  6.6.2. Endometriosis Rectum Vaginal Septum
  6.6.3. Lateral and Sciatic Compartment
  6.6.4. Intestinal Endometriosis
  6.6.5. Endometriosis in the Urinary Tract
6.7. Extrapelvic Endometriosis
6.8. Reproductive Effects of Laparoscopy and Endometriosis
6.9. New Developments in Endometriosis and Laparoscopy

Module 7. Minimally Invasive Surgery

7.1. General Introduction
7.2. History of Laparoscopy
7.3. Introduction to Hysteroscopic Surgery
7.4. Ergonomics in Laparoscopy
7.5. Asepsis and Antisepsis
  7.5.1. Hand Washing
  7.5.2. Preparing Instrumentation: Sterilization.
  7.5.3. Preparing the Surgical Field
    7.5.3.1. Skin Cleansing
    7.5.3.2. Proper Cloth Placement
7.6. Laparoscopic Operating Room
  7.6.1. Conventional Operating Rooms
  7.6.2. Integrated Operating Rooms
  7.6.3. Future Perspectives
7.7. Preoperative Preparation for Laparoscopy
  7.7.1. Physical Preparation for Patients
  7.7.2. Preoperative Medication and Bowel Preparation
  7.7.3. Patient Position on the Operating Table
7.8. *Fast-Track* / ERAS Programs
7.9. Anesthetic Considerations in Endoscopic Surgery
  7.9.1. General Aspects
  7.9.2. Circulatory System Involvement
  7.9.3. Respiratory System Involvement
  7.9.4. Spinal Catheter Placement and Other Blockages
  7.9.5. Postoperative Recovery

Module 8. Instrumentation, Materials and Electrosurgery

8.1. Laparoscopy Tower and General Supplies
8.2. Specific Vision Systems
  8.2.1. Full HD Systems
  8.2.2. 3D Vision Systems
  8.2.3. 4K Vision Systems
8.3. Endoscopy
  8.3.1. Rigid Endoscopy
  8.3.2. Flexible and Angle Adjustable Endoscopes
  8.3.3. Small Bore Endoscopes
8.4. Insufflation Systems
  8.4.1. General Functioning
  8.4.2. Smoke Extraction Systems
8.5. Image Recording Modules
8.6. Access Instrumentation
  8.6.1. Veress Needle
  8.6.2. First Access Trocars
  8.6.3. Accessory Trocars
8.7. Grasping Instruments
  8.7.1. Types of Instruments
  8.7.2. Most Appropriate Uses for Each
8.8. Cutting Instruments
8.9. Electrosurgery
  8.9.1. Electrosurgery in Medicine
  8.9.2. Monopolar Energy
  8.9.3. Bipolar Energy
  8.9.4. Electrical Isolation of Instruments
  8.9.5. Precautions to Avoid Accidents
8.10. Endoscopic Tissue Sealants
8.11. Bags and Specimen Extraction
8.12. Endodontics and Instrumentation for General Surgery
8.13. Morcellators and Containment Systems
8.14. Other Instruments: Suction, Retractors, Organ Suspension Systems, Port Closure Systems, Tie Rods, etc.



Module 9. General Training in Minimally Invasive Surgery

9.1. Introduction
9.2. Training Programs. Learning Pyramid
  9.2.1. Organ Bank and Artificial Phantoms
9.3. Ergonomics in CL
9.4. Devices for CL Training Simulators
  9.4.1. Justification
  9.4.2. Classification
  9.4.3. Requirements
9.5. Live Experimental Models in Gynecologic Endoscopy
  9.5.1. Animal Welfare
  9.5.2. Justification for Its Use
  9.5.3. Techniques Validated in Live Experimental Models

Module 10. Laparoscopic Suture Training

10.1. Introduction and Suture Use in Endoscopy
10.2. Types of Needles
10.3. Types of Sutures Used
  10.3.1. Conventional Sutures
  10.3.2. Vascular Suture
  10.3.3. Bearded Suture
  10.3.4. Automatic Suture Systems
10.4. Specific Instrumentation
  10.4.1. Types of Needle Holders
  10.4.2. Low Knots
  10.4.3. LapraTy Applicator
  10.4.4. Others

10.5. Technical Aspects
- 10.5.1. Introducing the Needle into the Cavity
- 10.5.2. Needle Placement in Holder
- 10.5.3. Types of Sutures
- 10.5.4. Intracorporeal Knotting
- 10.5.5. Extracorporeal Knotting
- 10.5.6. Single-Port Knotting
- 10.5.7. Sutures and Special Types of Knots (Vascular, Intestinal)
- 10.5.8. Suture Removal

Module 11. Complications in Minimally Invasive Surgery

11.1. Access and Abdominal Wall Complications
- 11.1.1. Arterial Wall Injury
- 11.1.2. Vascular Lesions upon Entry
- 11.1.3. Intestinal Lesions upon Entry
- 11.1.4. Port-of-Entry Herniation
- 11.1.5. Infections
- 11.1.6. Others

11.2. Intraoperative Vascular Complications
- 11.2.1. Prevalence and Etiology
- 11.2.2. Resolution
- 11.2.3. Postoperative Aftercare.

11.3. Intraoperative Intestinal Complications
- 11.3.1. Prevalence and Etiology
- 11.3.2. Resolution
- 11.3.3. Postoperative Aftercare.

11.4. Urologic Complications
- 11.4.1. Prevalence and Etiology
- 11.4.2. Resolution
- 11.4.3. Postoperative Monitoring

11.5. Nerve Complications

11.6. Inadvertent Complications

11.7. Complications Specific to Radical Hysterectomy

11.8. Complications Arising from the Meshes

11.9. Other Complications: Lymphoceles, Infections, Pulmonary Thromboembolism (PTE), etc.

Module 12. Ultra-Minimally Invasive Surgery

12.1. Introduction to Ultra Minimally Invasive Surgery

12.2. Single-Port Surgery
- 12.2.1. Evidence in Gynecology for Its Use
- 12.2.2. Specific Instruments.
- 12.2.3. Surgical Technique by Procedures
- 12.2.4. *Single-Glove*

12.3. Mini-Laparoscopic Surgery
- 12.3.1. Evidence in Gynecology for Its Use
- 12.3.2. Specific Instruments.
- 12.3.3. Surgical Technique by Procedures

12.4. Surgery without Ports of Entry
- 12.4.1. Evidence in Gynecology for Its Use
- 12.4.2. Specific Instruments.
- 12.4.3. Surgical Technique by Procedures

12.5. Other Ultra-Mini-Invasion Breakthroughs

12.6. Comparison between the Different Techniques

Module 13. Robotic Surgery in Gynecology

13.1. Introduction and Advantages of Robotic Surgery
13.2. Different Types of Robotic Systems
  13.2.1. Da Vinci System
  13.2.2. Zeus System
  13.2.3. Amadeus-Titan System
  13.2.4. Others
13.3. Instrumentation in Robotic Surgery
13.4. *Docking* and *Setting* Surgical Robots
13.5. Comparison between the Robotic Pathway and Other Pathways
13.6. Financial Factors and Robotic Efficiency
13.7. Complications in Robotic Surgery
13.8. *Single-Port* in Robotics
13.9. New Developments in Robotics

Module 14. Biological Basis of Cancer

14.1. Cell Growth Regulation
14.2. Carcinogenesis and Carcinogens
14.3. Genetics of Cancer
14.4. Mechanisms of Apoptosis and Programmed Cell Death
14.5. Molecular Mechanisms of Cancer Production and Metastasis
14.6. Origin of Genetic Alterations
14.7. Epigenetic Changes and Oncogenes
14.8. Angiogenesis

Module 15. Basis of Chemotherapy Treatment, Adverse Effects and New Therapies

15.1. Introduction
15.2. Justification for the Use of Chemotherapy
15.3. Development of Cancer and the Influence of Chemotherapy
  15.3.1. Tumor Growth
  15.3.2. Cellular Cycle
  15.3.3. Specific Drugs for each of the Cellular Phases
15.4. Factors that Influence Treatment
  15.4.1. Tumor Characteristics
  15.4.2. Patient Tolerance
  15.4.3. Treatment Objectives
  15.4.4. Pharmacological Factors and Administration Routes
15.5. Principles of Resistance to Drugs
15.6. Combined Therapies
15.7. Treatment or Dose Adjustments
15.8. Drug Toxicity
15.9. General Management of Secondary Effects and Complications of Chemotherapy
15.10. Antineoplastic Agents in Gynecology
  15.10.1. Alkylating Agents
  15.10.2. Antibiotics
  15.10.3. Antimetabolites
  15.10.4. Plant Alkaloids
  15.10.5. Topoisomerase 1 Inhibitors
  15.10.6. Anti-Angiogenic Drugs
  15.10.7. PARP Inhibitors
  15.10.8. Tyrosine Kinase Inhibitors
  15.10.9. Other Drugs
15.11. Future Indications

Module 16. Endometrial Cancer I

16.1. Epidemiology and Etiopathogenesis
16.2. Precancerous Lesions.
16.3. Hereditary Carcinoma
16.4. Pathological Anatomy and Different Types of Tumors
16.5. Diagnostic Process
16.6. Imaging Tests, Tumor Markers and Possible *Screening*
16.7. Molecular Diagnostic Tests
16.8. FIGO Classification and Others

Module 17. Endometrial Cancer II

17.1. Introduction
17.2. General Aspects of Surgical Treatment
17.3. Low Risk Tumors (Stage I, Grade 1)
17.4. High Risk Tumors (Grade 2-3, Serous or Clear Cells)
17.5. Laparotomy vs. Laparoscopy
17.6. Introduction of Robotic Surgery
17.7. Surgical Technique for High-Risk Tumors
17.8. Adjuvant Treatment
  17.8.1. Observation without Additional Treatment
    17.8.1.1. Low Risk, Early Stage, Low Grade
  17.8.2. Adjuvant Radiotherapy
    17.8.2.1. Early Stage, Intermediate and High Risk
    17.8.2.2. Advanced Stages
  17.8.3. Adjuvant Chemotherapy
  17.8.4. Peculiarities of Serous Tumors and Clear Cells
17.9. Hormonal Treatment
17.10. Recurrent Endometrial Cancer
  17.10.1. Surgical Management
  17.10.2. Radiotherapy
  17.10.3. Chemotherapy
17.11. Follow-up Treatment of Endometrial Cancer
17.12. Prognosis

Module 18. Cervical Cancer I

18.1. Epidemiology and Etiopathogenesis of the Disease
18.2. Precancerous Lesions and the Evolutionary Process
18.3. Risk Factors for Contracting the Disease
18.4. Notions about Cervical Pathology and HPV
18.5. Normal Colposcopy and Vulvoscopy
18.6. Abnormal Colposcopy and Vulvoscopy
18.7. Cervical Cancer Screening
18.8. Hereditary Carcinoma
18.9. Forms of Presentation in Anatomic Pathology
18.10. Diagnostic Process: Imaging Tests and Tumor Markers
18.11. Role of New Technologies such as PET-CT
18.12. FIGO and TNM Classification in Cervical Carcinoma

Module 19. Cervical Cancer II

19.1. Treatment of Cervical Intraepithelial Neoplasia (CIN)
  19.1.1. CIN Surgery
  19.1.2. CIN Immunotherapy
19.2. Invasive Treatment of Cervical Cancer
  19.2.1. Radical Hysterectomy with Nerve Preservation
  19.2.2. Less Radical Hysterectomy
  19.2.3. Radical Endoscopic Hysterectomy
  19.2.4. Selective Sentinel Node Biopsy
  19.2.5. Para-aortic Advanced Stage Lymphadenectomy Staging
19.3. Radiotherapy and Chemotherapy
  19.3.1. Concurrent Chemoradiotherapy
  19.3.2. Enhanced Radiation Therapy Treatment Modalities
  19.3.3. Chemotherapy Modalities in Concurrent Treatment
  19.3.4. Preoperative Chemoradiotherapy
  19.3.5. Adjuvant Therapy after a Radical Hysterectomy
  19.3.6. Neoadjuvant Chemotherapy
  19.3.7. Adjuvant Therapy after Neoadjuvant and Previous Surgery

19.4. Treatment of Metastasis, Recurrent or Persistent Disease
- 19.4.1. Surgical Management
- 19.4.2. Chemotherapy

19.5. Management of Cervical Adenocarcinoma
- 19.5.1. Adenocarcinoma *in Situ* (AIS)
- 19.5.2. Comparison Between Squamous Cell Carcinomas and Adenocarcinomas
- 19.5.3. Surgery vs. Radiotherapy in Invasive Adenocarcinoma
- 19.5.4. Chemotherapy

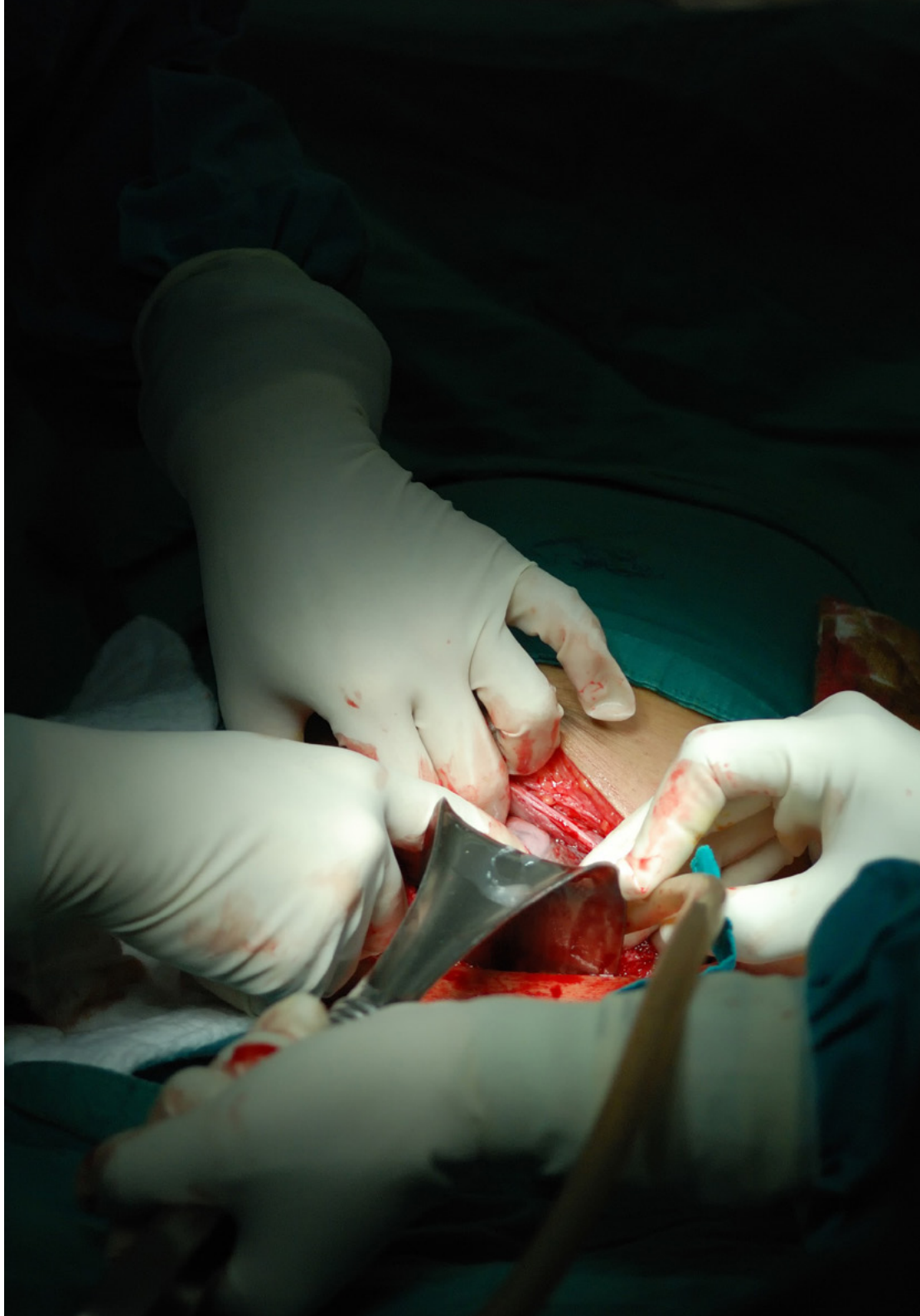
19.6. Monitoring

Module 20. Ovarian Cancer I

20.1. Epidemiology of Ovarian and Fallopian Tube Cancer
20.2. Etiopathogenesis and tubal origin, new trends
20.3. Precancerous Lesions in the Fallopian Tubes
20.4. Ovarian Cancer Screening
20.5. Hereditary Carcinoma and How to Evaluate It
20.6. Histological Forms and Pathological Anatomy
20.7. Diagnostic Process
- 20.7.1. Clinical Symptoms
- 20.7.2. Ultrasound
- 20.7.3. Computerized Tomography
- 20.7.4. Magnetic Resonance
- 20.7.5. Positron Emission Tomography

20.8. Serum Tumor Markers
- 20.8.1. CA125
- 20.8.2. HE4
- 20.8.3. CA19.9
- 20.8.4. CEA
- 20.8.5. Other Markers

20.9. FIGO Classification of the Disease



Module 21. Ovarian Cancer II

21.1. General Surgical Treatment
21.2. Complete *Cytoreduction* and Primary Debulking
21.3. Neoadjuvant Treatment and When to Choose It
21.4. Interval and *Second Look* Treatments
21.5. Adjuvant Therapy: Carboplatin-Taxol and Other Options
21.6. Radiotherapy: What Role Does it Play?
21.7. Hormonal Therapy Possibilities in Ovarian Cancer
21.8. Prognosis and Disease-Free Interval
21.9. Monitoring and Treatment of Relapses
21.10. Controversies in the Management of Ovarian Cancer
21.11. Peritoneal Carcinomas Hyperthermic Therapy
21.12. Intraperitoneal Chemotherapy, Indications and Results

Module 22. Vulvar Cancer I

22.1. Epidemiology and Relationship with HPV
22.2. Etiopathogenesis and Precancerous Lesions
22.3. VIN I, II, III VAIN and Other Lesions
22.4. Vulvar Cancer Screening
22.5. Hereditary Carcinoma
22.6. Pathological Anatomy, Histological Types
22.7. Imaging Tests and Extension Study
22.8. Tumor Markers: SCC

Module 23. Vulvar Cancer II

23.1. Introduction
23.2. Vulvar Paget's Disease
  23.2.1. General Aspects
  23.2.2. Paget's Disease Type 1
    23.2.2.1. Prevalence
    23.2.2.2. Clinical Characteristics
    23.2.2.3. Diagnosis
    23.2.2.4. Treatment
  23.2.3. Paget's Disease Type 2 and 3
23.3. Invasive Paget's Disease
  23.3.1. General Aspects
  23.3.2. Prognosis
23.4. Invasive Vulva Carcinoma
  23.4.1. Squamous Cell Carcinoma
  23.4.2. Clinical Characteristics
  23.4.3. Diagnosis
  23.4.4. Dissemination Pathways
  23.4.5. Staging
  23.4.6. Treatment
    23.4.6.1. Primary Lesion Management
    23.4.6.2. Local Control after Primary Surgical Treatment
    23.4.6.3. Management of Ganglionic Chains
    23.4.6.4. Post-Operative Care
      23.4.6.4.1. Early postoperative complications
      23.4.6.4.2. Late Postoperative Complications

23.4.6.5. Use of Sentinel Lymph Node
23.4.6.5.1. Advanced Disease
23.4.6.5.2. General Aspects
23.4.6.5.3. Management of Ganglionic Chains
23.4.6.5.4. Management of Primary Tumor
23.4.6.5.4.1. Surgery
23.4.6.5.4.2. Radiotherapy
23.4.6.5.4.3. Chemotherapy
23.4.6.6. Role of radiotherapy in vulvar cancer.
23.4.7. Recurrent Vulvar Cancer
23.4.8. Prognosis
23.4.9. Monitoring
23.5. Vulva Melanoma
23.5.1. Introduction
23.5.2. Clinical Characteristics
23.5.3. Pathologic Anatomy
23.5.4. Staging
23.5.5. Treatment
23.5.5.1. Primary Lesion Management
23.5.5.2. Management of Ganglionic Chains
23.5.6. Prognosis
23.6. Carcinoma of Bartholin's Gland
23.6.1. General Aspects
23.6.2. Treatment
23.6.3. Prognosis
23.7. Basal Cell Carcinoma
23.8. Verrucous Carcinoma
23.9. Vulva Sarcoma
23.9.1. Introduction
23.9.2. Leiomyosarcoma
23.9.3. Epithelioid Sarcoma
23.9.4. Rhabdomyosarcoma
23.9.5. Merkel Cells Carcinoma

Module 24. Uterine Sarcoma I

24.1. Introduction
24.2. Epidemiology
24.2.1. Tumors
24.2.2. Age
24.2.3. Histological Distribution
24.2.4. Racial Distribution
24.3. Risk Factors
24.3.1. Heritage
24.3.2. Hormone Therapy
24.3.3. Radiation Exposure
24.4. Pathologic Anatomy
24.4.1. Leiomyosarcoma
24.4.2. STUMP
24.4.3. Benign Metastasizing Leiomyoma
24.4.4. Carcinosarcoma
24.4.5. Endometrial Stromal Neoplasms
24.4.6. Stromal Nodule
24.4.7. Endometrial Stromal Sarcoma
24.4.8. Mullerian Adenosarcoma
24.5. Clinical Manifestations
24.6. Imaging Tests
24.6.1. Magnetic Resonance
24.6.2. Tumor Markers
24.7. FIGO Staging
24.8. Conclusions

Module 25. Uterine Sarcoma II

25.1. Introduction
25.2. Uterine Leiomyosarcoma
  25.2.1. Early Stages
    25.2.1.1. Surgery
    25.2.1.2. Adjuvant Radiotherapy
    25.2.1.3. Chemotherapy
  25.2.2. Recurrent or Metastatic Disease
    25.2.2.1. Surgery
    25.2.2.2. Chemotherapy
    25.2.2.3. Hormone Therapy
  25.2.3. Prognostic Factors
25.3. Endometrial Stromal Sarcoma
  25.3.1. Early Stages
    25.3.1.1. Surgery
    25.3.1.2. Pelvic Radiotherapy
    25.3.1.3. Hormone Therapy
  25.3.2. Recurrent or Metastatic Disease
    25.3.2.1. Surgery
    25.3.2.2. Chemotherapy or Radiotherapy
  25.3.3. Prognostic Factors
25.4. Undifferentiated Endometrial Sarcoma
  25.4.1. Early Stages
    25.4.1.1. Surgery
    25.4.1.2. Adjuvant Radiotherapy
    25.4.1.3. Chemotherapy
  25.4.2. Recurrent or Metastatic Disease
    25.4.2.1. Surgery
    25.4.2.2. Chemotherapy or Radiotherapy
  25.4.3. Prognostic Factors
25.5. Conclusions

Module 26. Rare Gynecologic Tumors

26.1. Vagina Cancer
  26.1.1. Introduction
  26.1.2. Clinical Manifestations
  26.1.3. Diagnosis
  26.1.4. Pathologic Anatomy
    26.1.4.1. Squamous Carcinoma
    26.1.4.2. Adenocarcinoma
    26.1.4.3. Sarcoma
    26.1.4.4. Melanoma
  26.1.5. Tumor Staging
  26.1.6. Treatment of Disease
    26.1.6.1. Surgery
    26.1.6.2. Radiotherapy
    26.1.6.3. Treatment Complications
  26.1.7. Monitoring
  26.1.8. Prognosis
26.2. Gestational Trophoblastic Disease
  26.2.1. Introduction and Epidemiology
  26.2.2. Clinical Forms
    26.2.2.1. Hydatidiform Mole
      26.2.2.1.1. Complete Hydatidiform Mole
      26.2.2.1.2. Partial Hydatidiform Mole
    26.2.2.2. Gestational Trophoblastic Neoplasm
      26.2.2.2.1. After Molar Pregnancy
        26.2.2.2.1.1. Persistent Gestational Trophoblastic Neoplasm
      26.2.2.2.2. After Non-Molar Pregnancy
        26.2.2.2.2.1. Choriocarcinoma
        26.2.2.2.2.2. Placental Site Trophoblastic Tumor

26.2.3. Diagnosis
- 26.2.3.1. Human Chorionic Gonadotropin
- 26.2.3.2. Ultrasound Study
  - 26.2.3.2.1. Complete Mole
  - 26.2.3.2.2. Partial Mole
  - 26.2.3.2.3. Invasive Mole
  - 26.2.3.2.4. Choriocarcinoma and Placental Site Tumor
- 26.2.3.3. Other Imaging Techniques

26.2.4. Pathologic Anatomy
- 26.2.4.1. Hydatidiform Mole
  - 26.2.4.1.1. Complete Mole
  - 26.2.4.1.2. Partial Mole
- 26.2.4.2. Invasive Mole
- 26.2.4.3. Choriocarcinoma
- 26.2.4.4. Placental Site Trophoblastic Tumor
- 26.2.4.5. Epithelioid Trophoblastic Tumor

26.2.5. Staging

26.2.6. Treatment
- 26.2.6.1. Chemotherapy
  - **26.2.6.1.1.** Low-Risk Disease
  - 26.2.6.1.2. High-Risk Disease and Metastasis
  - 26.2.6.1.3. Chemoresistant Disease
- 26.2.6.2. Surgery
  - 26.2.6.2.1. Molar Evacuation
  - 26.2.6.2.2. Hysterectomy
  - 26.2.6.2.3. Myometrial Resection
  - 26.2.6.2.4. Pulmonary Resection
  - 26.2.6.2.5. Craniotomy
  - 26.2.6.2.6. Other Surgical Procedures
  - 26.2.6.2.7. Selective Arterial Embolization

26.2.7. Post-Treatment Monitoring
- 26.2.7.1. Follow-Up after Molar Evacuation
- 26.2.7.2. Monitoring after Gestational Neoplasm Treatment

26.2.8. Prognosis

26.3. Metastatic Tumor in the Genital Tract

26.3.1. Introduction

26.3.2. Clinical Manifestations
- 26.3.2.1. Secondary Tumors in the Uterine Body or Cervix
  - 26.3.2.1.1. From Genital or Pelvic Organs
  - 26.3.2.1.2. From Extragenital or Pelvic Organs
- 26.3.2.2. Secondary Tumors in the Vagina
- 26.3.2.3. Secondary Tumors on the Vulva
- 26.3.2.4. Secondary Tumors in the Ovaries

26.3.3. Diagnosis

26.3.4. Pathologic Anatomy
- 26.3.4.1. Gastrointestinal Tumors
  - 26.3.4.1.1. Metastasis of Intestinal Cancer
  - 26.3.4.1.2. Krukenberg Tumor
- 26.3.4.2. Ovarian Lymphona

26.3.5. Treatment and Prognosis

26.4. Neuroendocrine Tumors

26.4.1. Introduction

26.4.2. Pathologic Anatomy
- 26.4.2.1. Well-Differentiated Tumors
- 26.4.2.2. Poorly Differentiated Tumors

26.4.3. Clinical Manifestations and Diagnosis
- 26.4.3.1. Small Cell Tumor in the Vulva and Vagina
- 26.4.3.2. Small Cell Tumor in the Uterus
- 26.4.3.3. Neuroendocrine Tumors in the Cervix
  - 26.4.3.3.1. Small Cell Neuroendocrine Carcinoma

26.4.3.3.2. Large Cell Neuroendocrine Carcinoma
26.4.3.4. Ovarian, Fallopian Tube and Wide Ligament Tumor
26.4.3.4.1. Ovarian Carcinoid
26.4.3.4.1.1. Insular Carcinoid
26.4.3.4.1.2. Trabecular Carcinoid
26.4.3.4.1.3. Mucinous Carcinoid
26.4.3.4.1.4. Strumal Carcinoid
26.4.3.4.2. Small Cell Lung Type
26.4.3.4.3. Undifferentiated Non-Small Cell Carcinoma
26.4.4. Treatment
26.4.5. Monitoring
26.4.6. Prognosis
26.5. Tumors of the Recto-Vaginal Septum

Module 27. Fertility Preservation in Gynecologic Oncology

27.1. Introduction
27.1.1. Symptomology Associated with Gynecologic Tumors
27.2. Pain
27.3. Gastrointestinal Symptoms
27.3.1. Diarrhea
27.3.2. Constipation
27.3.3. Malignant Intestinal Obstruction
27.3.3.1. Conservative Treatment
27.3.3.2. Surgical Management
27.4. Ascites
27.5. Respiratory Symptoms
27.5.1. Pleural Effusion
27.6. Edema
27.7. Anorexia and Weight Loss
27.8. Deep Vein Thrombosis
27.9. Pelvic Disease Progression
27.9.1. Vaginal Bleeding
27.9.2. Fistulas.
27.10. Palliative Pelvic Exenteration
27.11. Metastasis of Other Organs
27.11.1. Liver
27.11.2. Brain
27.11.3. Bone
27.11.3.1. Hypercalcemia
27.12. Anxiety and Depression
27.13. Dying Patient Care

Module 28. Endoscopic Surgery in Gynecologic Oncology

28.1. Oncologic Laparoscopy
28.1.1. Effect of Pneumoperitoneum and Dissemination
28.1.2. *Port-Site* Metastasis
28.1.3. Uterine Manipulator and Dissemination
28.2. Tumor Dissemination Routes
28.2.1. Peritoneal Dissemination
28.2.2. Lymphatic dissemination:
28.2.3. Hematogenous Dissemination
28.3. Nodal Selective Study
28.3.1. Sentinel Lymph Node in Ovarian Cancer
28.3.2. Sentinel Lymph Node in Cervical Cancer
28.3.3. Sentinel Lymph Node in Endometrial Cancer
28.3.4. Types of Tracers
28.3.5. Sentinel Lymph Node Detection and Dissection Technique
28.4. Laparoscopy and Ovarian Cancer
28.4.1. Exploratory Laparoscopy in Ovarian Cancer
28.4.1.1. Suspicious Adnexal Masses
28.4.1.2. Advanced Ovarian Cancer: Laparoscopic Scores
28.4.2. Borderline Tumor Management
28.4.2.1. Laparoscopic Staging

28.4.2.2. Surgical Re-Staging
28.4.3. Staging Procedures
28.4.3.1. Abdominal Peritonectomy
28.4.3.2. Pelvic Lymphadenectomy
28.4.3.3. Para-Aortic Lymphadenectomy
28.4.3.3.1. Extraperitoneal
28.4.3.3.2. Transperitoneal
28.4.3.4. Laparoscopic Omentectomy
28.4.3.5. Other Procedures
28.4.4. Laparoscopy in Ovarian Cancer Recurrences
28.4.5. Laparoscopy in Interval Surgery
28.5. Laparoscopy in Cervical Cancer
28.5.1. Laparoscopy Indications
28.5.2. Laparoscopic Radical Hysterectomy
28.5.2.1. Radical Hysterectomy Classification
28.5.2.2. Nerve Preservation
28.5.2.3. Radicality Modulation
28.5.2.4. Detailed Surgical Technique
28.5.3. Special Characteristics of Radical Trachelectomy
28.5.3.1. Indications
28.5.3.2. Uterine Artery Preservation
28.5.3.3. Cervical Cerclage
28.5.3.4. Ovarian Oophoropexy
28.5.4. Laparoscopic Parametrectomy
28.5.5. Laparoscopic Treatment of Recurrences
28.5.5.1. Single Recurrences
28.5.5.2. Laparoscopic Exenteration
28.6. Laparoscopy in Endometrial Cancer
28.6.1. Laparoscopy and Staging in Endometrial Cancer
28.6.2. Laparoscopic Lymph Nodal Debulking
28.6.3. Other Particularities
28.7. Laparoscopic Inguinal Lymphadenectomy

Module 29. Stress and Its Impact on Fertility

29.1. Utility of Laparoscopy in Reproduction
29.2. Restoration of Fertility
29.2.1. *Essure* Device Removal by Laparoscopy
29.2.2. Tubal Recanalization
29.3. Adhesive Syndrome and Laparoscopy
29.4. Chromopertubation Use
29.5. Laparoscopic Surgery and Pregnancy
29.6. Laparoscopic Inguinal Lymphadenectomy

Module 30. Introduction Anatomy Physiology Cellular Cycle

30.1. Introduction to the Concepts of Assisted Reproduction Epidemiology Reproductive Problems
30.2. Concepts of Reproductive Medicine
30.3. Epidemiology
30.4. Female Anatomy and Physiology
30.5. Ovogenesis
30.6. Ovarian Cycle Follicular Recruitment Waves
30.7. Male Anatomy and Physiology
30.8. Spermatogenesis
30.9. Gametogenesis Meiotic Cycle
30.10. Ovogenesis Ovogenesis-Foliculogenesis Relationship
30.11. Oocyte Quality Markers
30.12. Factors Affecting Oocyte Quality
30.13. Spermatogenesis and Sperm Production
30.14. Semen Quality Markers
30.15. Factors which Affect Seminal Quality

Module 31. Gamete Interaction Fertilization Embryonic Development

31.1. Interaction of Gametes in the Female Tract
31.2. Acrosomal Reaction and Hyperactivation
31.3. Sperm-Oocyte Interaction
31.4. Sperm-Oocyte Fusion Oocyte Activation
31.5. Embryonic Development
31.6. Main Features in Pre-implantational Development
31.7. Implantation. Embryo-Endometrium Interaction
31.8. Pathology of Fertilization and Embryo Classification
31.9. Embryo Culture In Vitro Embryo Culture Systems Culture Media, Environmental Conditions and Supplements. One Step and Sequential Cultures Renewal of Culture Media and Needs of the Embryo
31.10. Evaluation of Embryonic Development in Vitro: Morphology and Morphokinetics Classical Embryonic Morphology *Time-Lapse* Systems Embryonic Morphokinetics Embryonic Classification

Module 32. Study of the Female Factor Role of Surgery in Reproduction

32.1. Ovary Reserve Study
32.2. AMH
32.3. RFA
32.4. Tubal Permeability Assessment Techniques
32.5. Hysterosalpingography
32.6. Hysterosalpingosonography
32.7. Endometrial Assessment
32.8. The Role of Hysteroscopy
32.9. Endometrial*Scratching*
32.10. Endometrial Culture Microbiota
32.11. Window of Implantation Study
32.12. Immunological Factor Study
32.13. PCOS Ovary *Drilling*
32.14. Endometriosis and Adenomyosis
32.15. Uterine Myomas and Fertility
32.16. Hydrosalpinx Tubal Surgery in Tubal Reconstruction Techniques and Fertility Restoration
32.17. Uterine Alterations Metroplasties Septoplasties
32.18. Uterine Transplant
32.19. Repeated Miscarriages Implantation Failure

Module 33. Andrology Laboratory

33.1. Basic Analysis of Semen WHO 2010 Criteria
33.2. Sperm Mobility and Morphometry Analysis Using Automated Systems (CASA/CASMA)
33.3. Analysis of Sperm DNA: TUNEL, SCD, COMET, SCSA Relationship with Fertility
33.4. Oxidative Damage Assessment Determination of Antioxidants, Free Radicals and Evaluation of Lipid Peroxidation
33.5. Sperm Function by Molecular Markers: Apoptosis (AnnexinV, Caspases, Mb Permeability), Ubiquitination, Protein Phosphorylation
33.6. Epigenetic Alterations in Spermatozoa
33.7. Selection and Control of Semen Donors
33.8. Managing a Sperm Bank
33.9. Cleaning the Semen in Patients with HIV or Hepatitis
33.10. Semen Preparation for Artificial Insemination

Module 34. Reproductive Treatments Medication. Stimulation Protocols

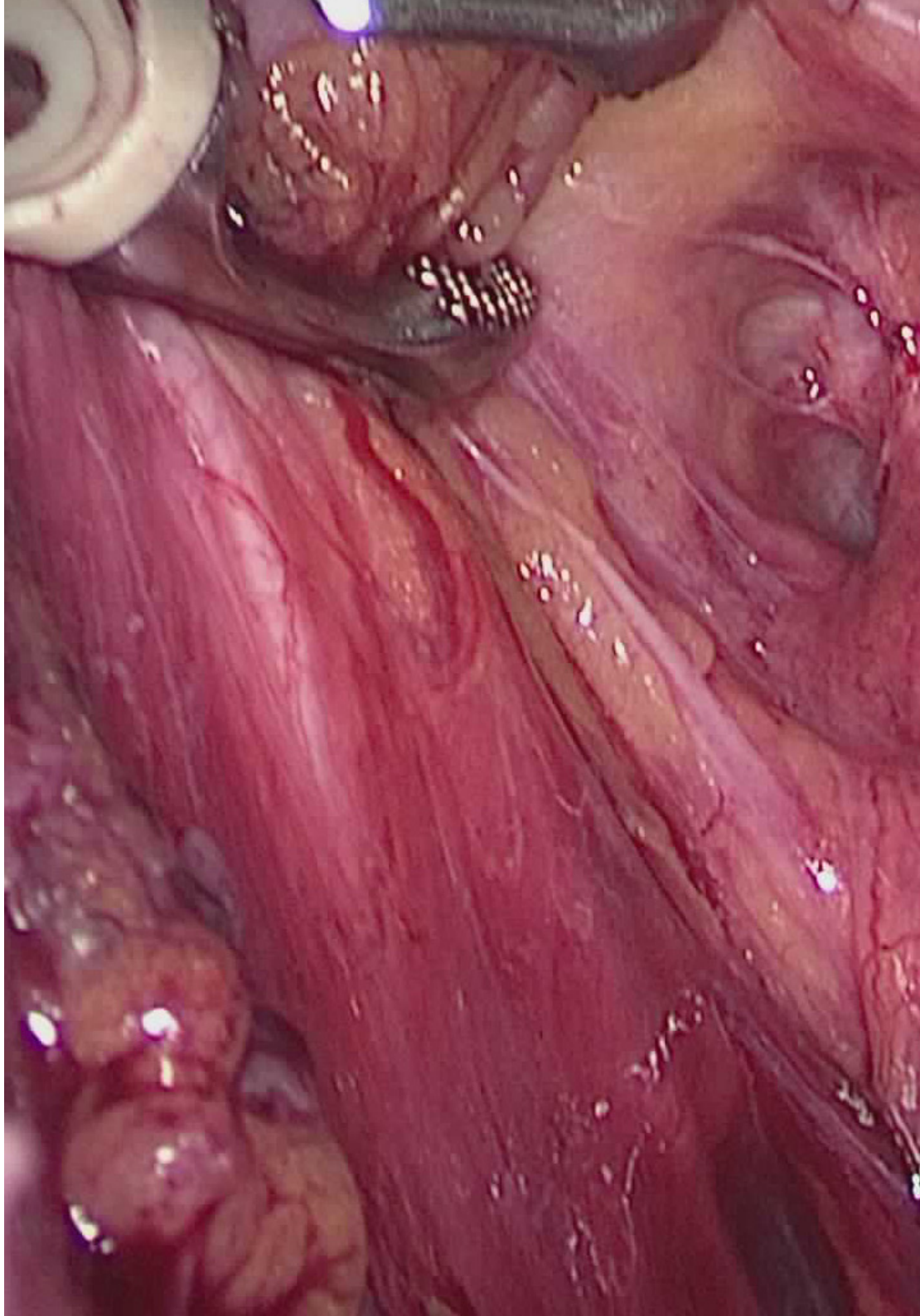
34.1. Evolution of Reproductive Treatments Throughout History
34.2. Drugs Involved in Ovarian Stimulation Ovulation Induction
34.3. Artificial Insemination Techniques Results
34.4. Fertilization In Vitro Ovarian Stimulation Protocols in High, Normal and Low Responders Luteal Phase Stimulation
34.5. Adjuvant Treatments Used in Low Ovarian Reserve
34.6. Fertilization In Vitro Cycle Tracking Ovarian Puncture Embryo Transfer
34.7. Embryo Cryotransfer Endometrial Preparation in Substituted Cycles
34.8. Egg Donation Embryoreception Surrogacy
34.9. Complications in Assisted Reproduction Treatments
34.10. Multiple Pregnancy Reduction Policy

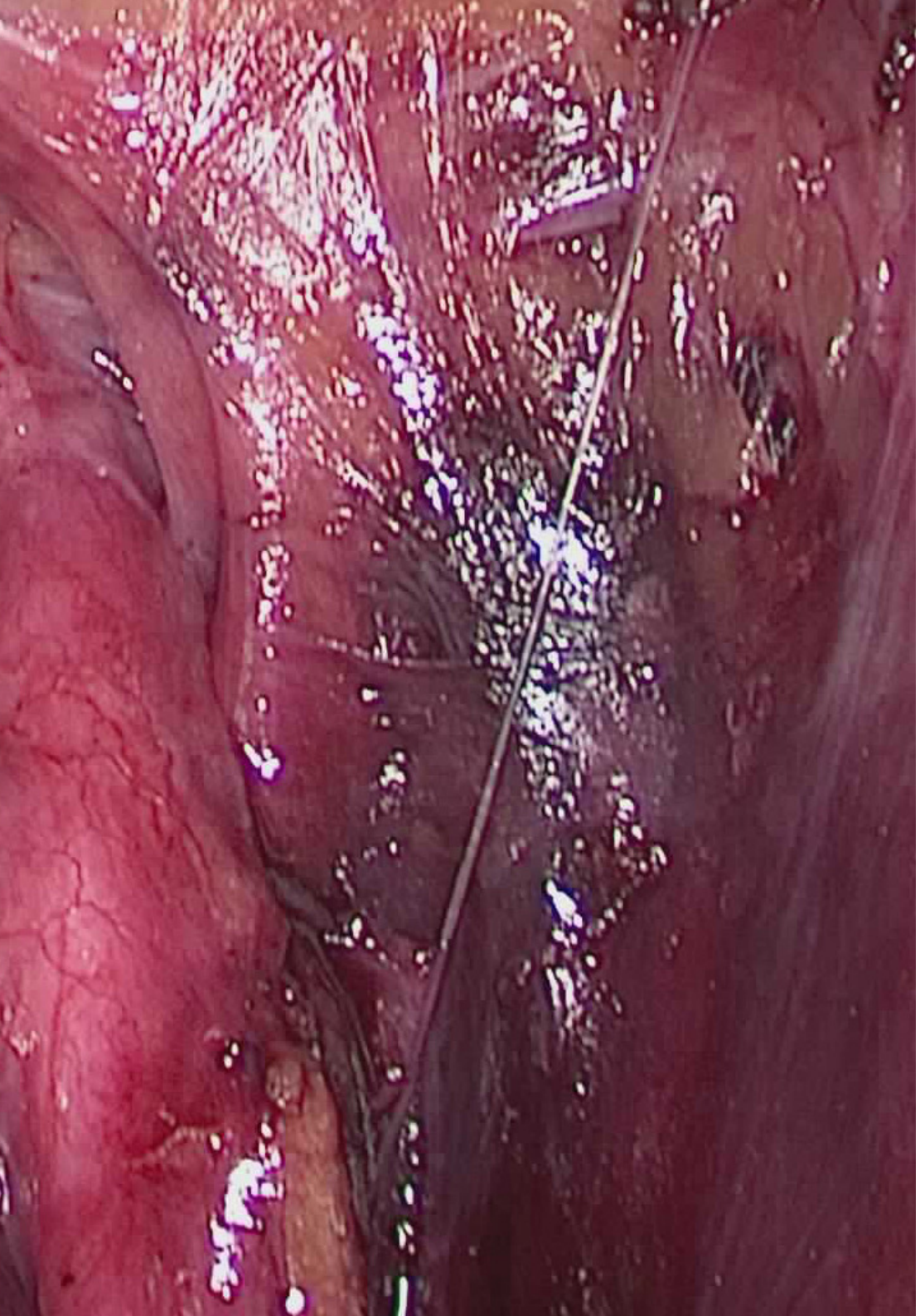
Module 35. Micromanipulation Techniques

35.1. IVF-ICSI
35.2. Use of Polarized Light Microscopy in Oocytes
35.3. Embryo Biopsy Types of Biopsy Corpuscule, Blastomere, Trophoectoderm
35.4. Collapse, *Hatching*,, Aspiration of Fragments
35.5. Improve the Embryo Quality Transfer of Nucleus and Cytoplasm
35.6. Cloning in Mammals Background Basic Principles of Cloning Applications in Medicine
35.7. Problems with Cloning Epigenesis Reprogramming
35.8. Genetic Modification CRISPR
35.9. Improve the Cytoplasmic Quality of the Oocyte
35.10. In Vitro Gamete Production

Module 36. Gamete and Embryo Cryopreservation

36.1. Cryobiology Cryobiological Principles and Cryoprotective Agents Cryopreservation Systems Factors Affecting the Freezing Process Additives Application of Cryobiology
36.2. The Sperm Cell Structure and Functionality Physicochemical Processes that Induce Freezing in the Spermatozoon Factors Determining Sperm Fertilization and Viability after Thawing
36.3. Cryopreservation of Semen Features. Regulations
36.4. The Oocyte Characteristics and Conditioning Factors in Cryopreservation Importance and Method of Selection Ethical and Legal Aspects
36.5. Cryopreservation in Human Embryos Importance and Method of Selection Ethical and Legal Aspects
36.6. Cryopreservation of Ovarian Tissue Laboratory Technique
36.7. Factors Affecting Performance in a Cryopreservation Program
36.8. How to Manage and Organize a Biobank and its Safety





Module 37. Fertility Preservation

37.1. Fertility Preservation Cancer Epidemiology Age and Reproduction
37.2. Fertility Preservation for Non-Medical Reasons
37.3. Fertility Preservation for Oncologic Reasons
37.4. Fertility Preservation for Non-Oncologic Medical Reasons
37.5. Oocyte Vitrification Technique and Results
37.6. Ovarian Cortex Cryopreservation
37.7. Cryopreservation of Semen
37.8. Vitro Maturation of Oocytes
37.9. Other Methods of Fertility Preservation: Conservation Surgery in Gynecologic Cancer Ovarian Transposition
37.10. Treatment with GnRH Analogues Prior to Gonadotoxic Treatments

Module 38. Genetics in Reproduction

38.1. Important Concepts in the Genetics of Reproduction
38.2. Epigenetics. Influence on Reproduction
38.3. Genetic Diagnostic Techniques
38.4. Genetic Anomalies Related to Male and Female Sterility
38.5. Indications for Genetic Studies in Assisted Reproduction
38.6. Screening for Recessive Diseases Genetic *Matching*
38.7. Pre-implantational Genetic Diagnosis in Monogenic Diseases
38.8. Pre-implantational Genetic Screening in Assisted Reproduction Techniques
38.9. Mosaicisms
38.10. Genetic Counseling and Advice

Module 39. Legislation. Quality Research and Future Techniques

39.1. Ethical and Legal Aspects of Assisted Reproduction Treatments Law 14/2006
39.2. Treatment Legislation for Gametes from Donors Assisted Human Reproduction Information System (SIRHA) Platform
39.3. Quality Indicators in the Reproduction Laboratory Quality Control
39.4. Importance of Traceability in the Laboratory Electronic Traceability Systems
39.5. Research in Assisted Reproduction
39.6. Future of Reproduction Automation
39.7. Non-Invasive Preimplantational Genetic Diagnosis
39.8. Artificial Intelligence
39.9. Ovarian Rejuvenation

06

Methodology

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

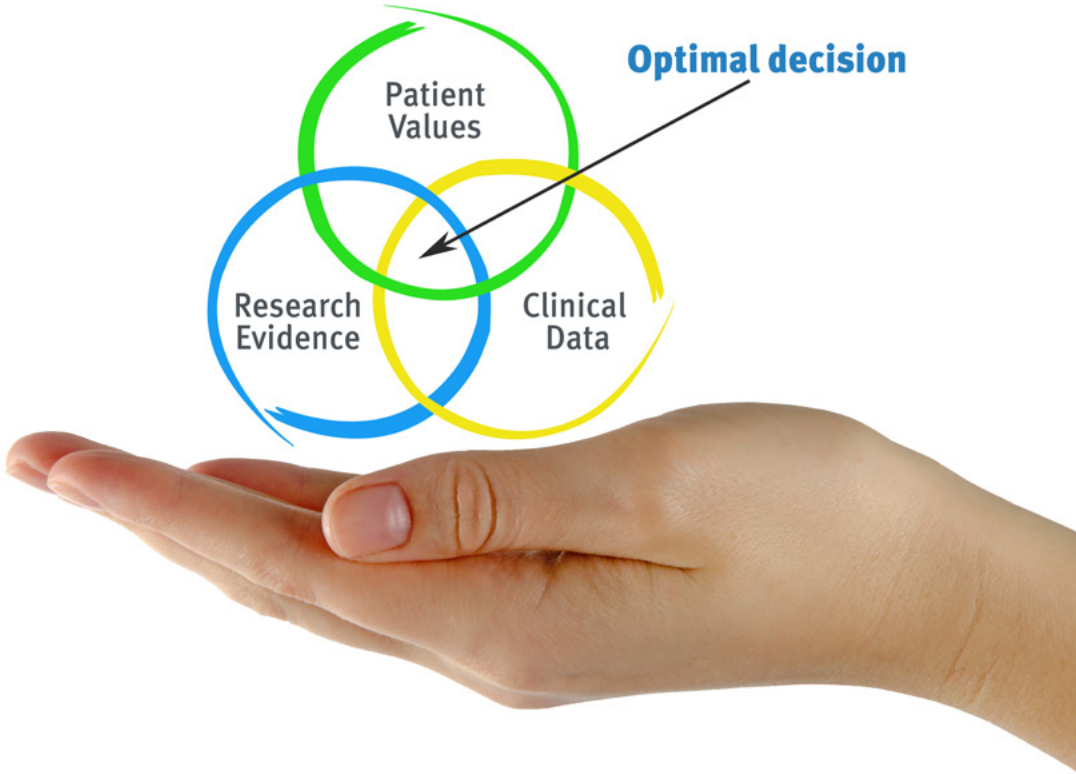
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the ***New England Journal of Medicine*** have considered it to be one of the most effective.

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

At TECH, we use the Case Method

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

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



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

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

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

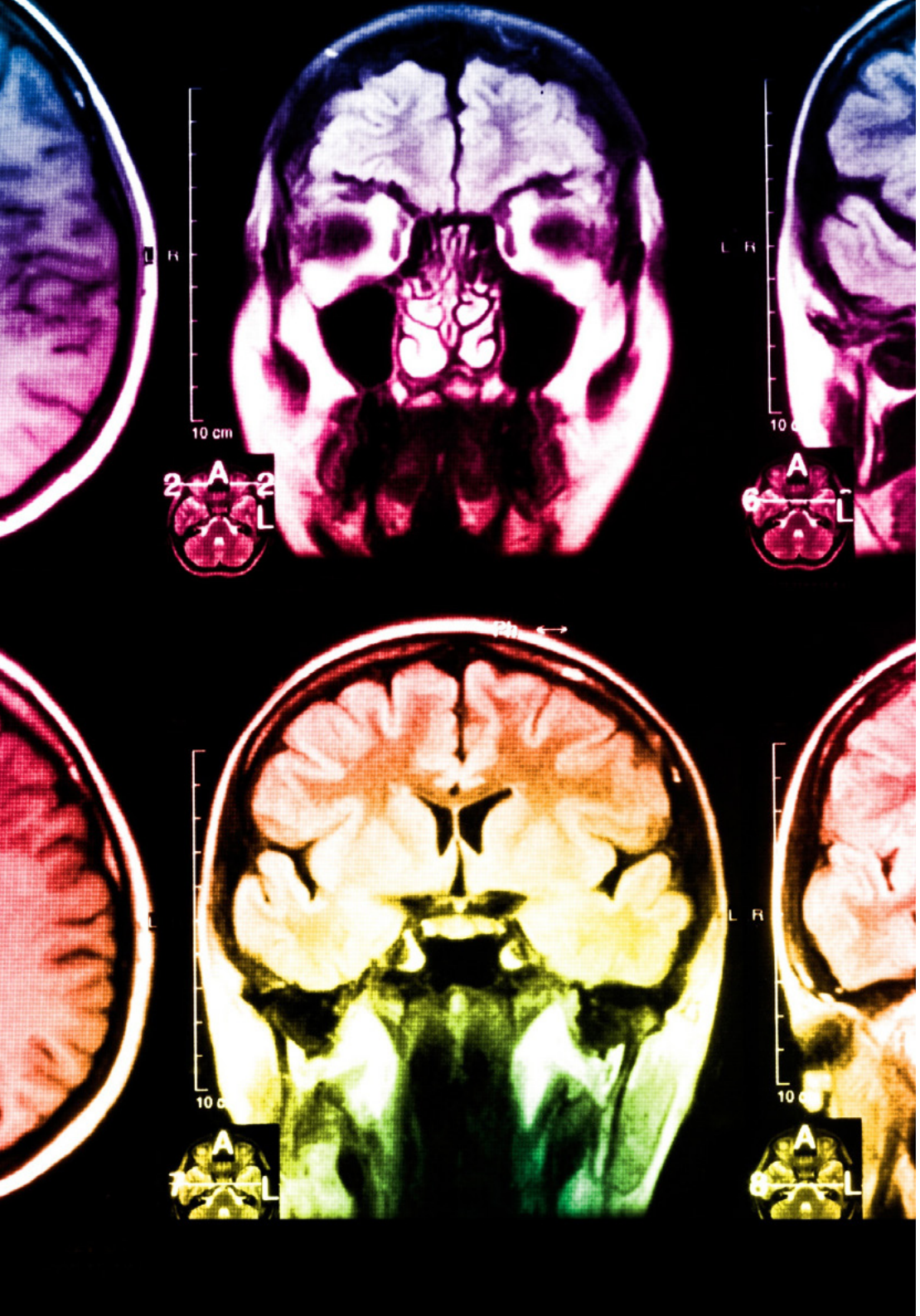
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate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

Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

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



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

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

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

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

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

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

Study Material

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

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

Surgical Techniques and Procedures on Video

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

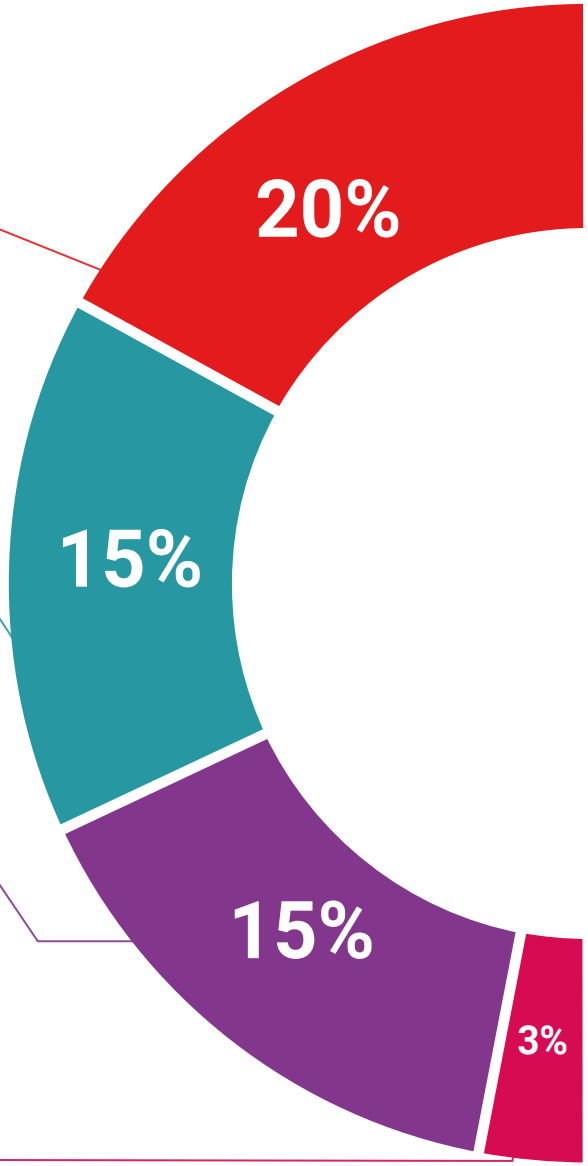
Interactive Summaries

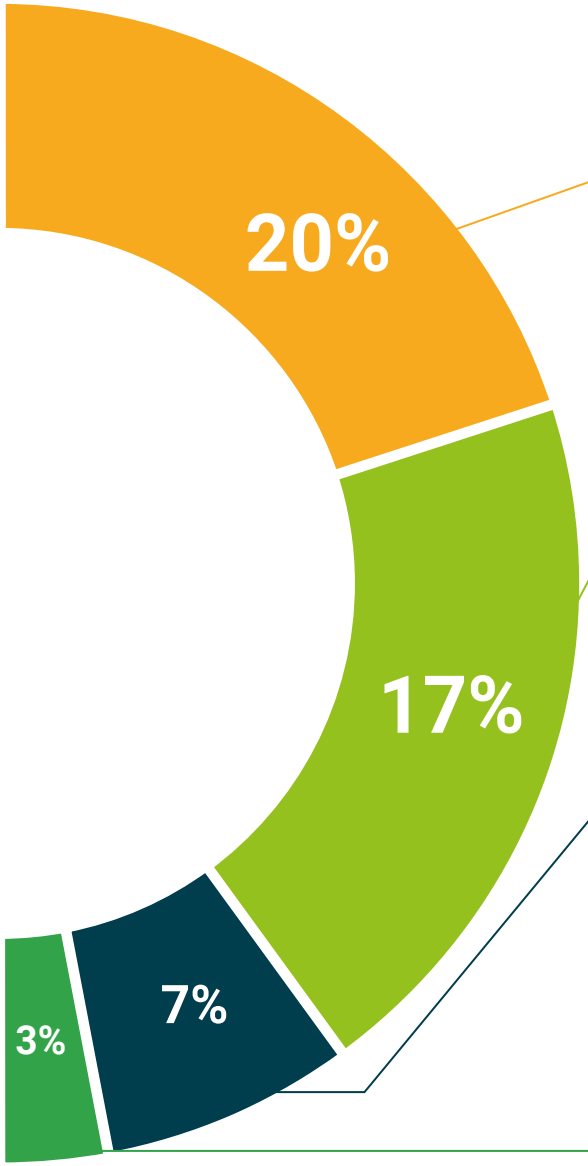
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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

Additional Reading

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





Expert-Led Case Studies and Case Analysis

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

Testing & Retesting

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

Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

Quick Action Guides

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

07

Certificate

This Advanced Master's Degree in Gynecologic Pathology and Assisted Reproduction 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 program will allow you to obtain your **Advanced Master's Degree diploma in Gynecologic Pathology and Assisted Reproduction** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra (***official bulletin***). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

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

Title: **Advanced Master's Degree in Gynecologic Pathology and Assisted Reproduction**

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 Gynecologic Pathology and Assisted Reproduction

This is a program of 3,000 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
Chancellor

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 Gynecologic Pathology and Assisted Reproduction

General Structure of the Syllabus

Year	Subject	ECTS	Type
1º	Female Surgical Anatomy	4	CO
1º	Hysteroscopic Surgery	4	CO
1º	Exploratory Laparoscopy and Benign Adnexal Pathology	4	CO
1º	Benign Uterine Pathology and Dysgenesis	3	CO
1º	Pelvic Floor Pathology and Use of Vaginal Meshes Laparoscopy in Endometriosis	3	CO
1º	Minimally Invasive Surgery	3	CO
1º	Instrumentation, Materials and Electrosurgery	3	CO
1º	General Training in Minimally Invasive Surgery Laparoscopic	3	CO
1º	Suture Training	3	CO
1º	Complications in Minimally Invasive Surgery Ultra-Minimally	3	CO
1º	Invasive Surgery	3	CO
1º	Robotic Surgery in Gynecology	3	CO
1º	Biological Basis of Cancer	3	CO
1º	Basis of Chemotherapy Treatment, Adverse Affects and New Therapies	3	CO
1º	Endometrial Cancer I	3	CO
1º	Endometrial Cancer II	3	CO
1º	Cervical Cancer I	3	CO
1º	Cervical Cancer II	3	CO

Year	Subject	ECTS	Type
2º	Ovarian Cancer I	3	CO
2º	Ovarian Cancer II	3	CO
2º	Vulvar Cancer I	3	CO
2º	Vulvar Cancer II	3	CO
2º	Uterine Sarcoma	3	CO
2º	Uterine Sarcoma II	3	CO
2º	Rare Gynecologic Tumors	3	CO
2º	Fertility Preservation in Gynecologic Oncology	3	CO
2º	Endoscopic Surgery in Gynecologic Oncology	3	CO
2º	Stress and Its Impact on Fertility	3	CO
2º	Introduction. Anatomy. Physiology. Cellular Cycle	3	CO
2º	Gamete Interaction Fertilization Embryonic Development	3	CO
2º	Study of the Female Factor Role of Surgery in Reproduction	3	CO
2º	Andrology Laboratory	3	CO
2º	Reproductive Treatments Medication. Stimulation Protocols	3	CO
2º	Micromanipulation Techniques	3	CO
2º	Gamete and Embryo Cryopreservation	3	CO
2º	Fertility Preservation	3	CO
2º	Genetics in Reproduction	3	CO
2º	Legislation Quality Research and Future Techniques	3	CO

Dr. Pedro Navarro Illana
Chancellor

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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

Gynecologic Pathology and Assisted Reproduction

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

Advanced Master's Degree

Gynecologic Pathology and Assisted Reproduction

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