

68423 - Research in gynecology and human reproduction

Syllabus Information

Academic Year: 2020/21

Subject: 68423 - Research in gynecology and human reproduction

Faculty / School: 104 - Facultad de Medicina

Degree: 530 - Master's in Introduction to Medical Research

ECTS: 5.0

Year: 1

Semester: Second semester

Subject Type: Optional

Module: ---

1.General information

1.1.Aims of the course

The subject and its expected results respond to the following approaches and objectives:

General objectives

In relation to the health and illness of women throughout their reproductive life, and of the mother and her child during pregnancy and childbirth:

? Promote clinical research in gynecology and reproductive health.

? Acquire specific knowledge and skills of research related to women's health and reproduction.

? Learn to integrate clinical and basic research into clinical care from a multidisciplinary perspective.

? Learn to participate in the planning and development of research projects, basic and medical.

Specific objectives

The specific objectives of each subject that make up the program for each subject within the subject Research in Gynecology and Human Reproduction are described in the block corresponding to each subject in the activities and resources section.

1.2.Context and importance of this course in the degree

Like many other topics covered in the Master, perinatal and reproductive medicine and women's health have unique characteristics. This course aims to initiate students into clinical and basic research focused on the world of human reproduction and the study of women's health. Our objective is to develop student autonomy as a researcher, through the development of proactive and personalized teaching.

1.3.Recommendations to take this course

Research in Gynecology and Human Reproduction is an optional subject of the University Master of Initiation to Research in Medicine (5 credits).

It is of interest to the eminently clinical researcher who wishes to improve her knowledge, aptitudes and skills in research and clinical care of human reproduction, pregnancy and women's health. For them the following sections will be developed:

? contraception

? study and treatment of human fertility

? embryonic and fetal development and long-term consequences

? pregnancy control

? sociocultural aspects

? reproductive endocrinology

? endoscopy in gynecology

? gynecological oncology

The subject is of interest, in addition to the obstetrician-gynecologist, for those whose career is directed at family medicine, pediatrics and internal medicine, as well as those who address research related to reproduction. Her teaching profile highlights the eminently applied character of its contents, both from the point of view of the researcher and the clinician.

2.Learning goals

2.1.Competences

After passing the subject, the student will be more competent to:

? Design, develop and disseminate research projects related to women's reproduction and health.

? Know the current state of knowledge in the main areas related to women's health and human reproductive medicine.

? Learn about the main lines of research underway focused on women's health and human reproductive medicine.

? Integrate clinical and basic research into routine clinical care.

2.2.Learning goals

The student, to pass this subject, must demonstrate that they have acquired the necessary knowledge to develop each of the points exposed in section 2.1.

2.3.Importance of learning goals

The course Research in Gynecology and Human Reproduction must allow the student to know the principles to develop research projects focused on the subject's theme.

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

3.1.Type of tests and their value on the final grade and evaluation criteria for each test

The student must demonstrate that they have achieved the expected learning outcomes through the following assessment activities.

3.1.1. Continuous evaluation:

Attendance and participation in face-to-face (or semi-face-to-face) work sessions will be taken into account. The qualification of this test will represent 30% of the final grade.

3.1.2.Directed work:

The student must demonstrate that he is capable of requesting a research project. To do this, you must make a request for a research project related to the subject matter, according to the structure of the Research Projects of the Carlos III Institute. Although each student must present their own research project, cooperative work will be encouraged among enrolled students, just as occurs in real research.

The work will be tutored by one of the teachers of the subject and must be sent before April 10, 2021 in PDF format to the coordinator of the subject (danoros@gmail.com). Each student must present their work to the rest of the group in the last face-to-face session of the subject. (April 13, 2020)

The qualification of this test will represent 50% of the final grade (dedication: 20 hours).

3.1.3. Assessment / objective final test:

Written test of 20 test questions, with 5 possible answers and only one correct answer, without penalty for wrong answer. The questions will be about the theme taught during the course.

It will take place on the last day of class of the subject, during the time of the last class. Date: April 13, 2021.

The qualification of this test will represent 20% of the final grade.

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

The learning of this subject is based on the critical analysis and the development of research models applicable in the clinical practice of the care and assistance of women throughout their reproductive life and of the mother and fetus during pregnancy.

4.2.Learning tasks

The program offered to the student to help him achieve the expected results includes the following activities:

4.2.1. Guided work sessions:

The teachers involved in this subject are professionals with high experience and recognition. The objective is to develop interactive work sessions based on their clinical and research experience. There will be work sessions guided by the different professors of the master. In principle, these sessions will be face-to-face, in the lecture hall of the Faculty of Medicine. However, it can be asked if the conditions advise it, and according to the students enrolled in the subject, to develop these sessions telematically using Google-Meet (or similar tools).

As a general working model, it is proposed that each content module that integrates the subject program within the subject, be presented, analyzed and discussed by the teacher with the students for 55 minutes with the following work scheme:

? Formal and structured presentation of current knowledge on the subject: 15 minutes.

? Presentation of a research project, scientific article, clinical guide or clinical case: 15 minutes.

? Group discussion and conclusions: 25 minutes.

? Presentation of teaching materials for self-employment after the session.

During the contact hours all the specific objective aspects of each topic will be developed. The objectives and concepts developed will be adapted to the problems and doubts that the students are raising about their experience in the search and analysis of information.

After the directed work sessions, the students must solve a problem that will arise at the end of the class.

The educational materials (sources of information, bibliography, databases, etc.) for the development of the classes will be made available to the students by the teachers.

4.2.2. Developing a request for a research project

The student must demonstrate that he / she is capable of writing an application for a research project. To do this, you must make a request for a research project related to the subject matter, according to the structure of the Research Projects of the Carlos III Institute. For this, you must contact one of the teachers of the Master for tutoring.

4.3.Syllabus

4.3.1. Program and schedule of the sessions:

The directed work sessions will take place on Tuesdays from March 2 to April 13, 2021, in classroom B of the Faculty of Medicine, with the following calendar:

Session 1. 02/03/2021. Presentation, work plan and concepts.

0. Presentation of the subject and work plan. Prof. Daniel Orós

1. My first research project in maternal-fetal medicine: planning, financing, development and dissemination. Clinical research: an alternative professional career.

Teachers:

Daniel Orós López (Associate Professor). Obstetrics and Gynecology Service. Lozano Blesa University Clinical Hospital. Department of Surgery. School of Medicine. Zaragoza's University.

Cristina Paules Tejero (Teaching Collaborator). Juan Rodés Contract. Carlos III Health Institute. Obstetrics and Gynecology Service. Lozano Blesa University Clinical Hospital. Department of Surgery. School of Medicine. Zaragoza's University.

Specific teaching objectives:

Presentation of the work plan: Introduction to the peculiarities of research in fetal medicine. Foundations for the development of a research project in perinatal medicine.

Contents

- ? Introduction to research in reproductive medicine
- ? The idea: approach to a research project in medicine
- ? Development of a research project in a clinical setting: advantages and limitations.
- ? Search for resources and financing
- ? Analysis of the data obtained
- ? Dissemination of results, publication and return to society. (Public engagement)
- ? Professional career as a clinical researcher.

Session 2. 03/03/2021. Clinical and social impact of research in reproductive health.

2. When the investigation becomes an emergency. Gestation and new challenges.

Teachers:

Purificación Mateo Alcalá (Associate Professor of Health Sciences). Obstetrics and Gynecology Service. Lozano Blesa University Clinical Hospital. Department of Surgery. School of Medicine. Zaragoza's University.

Sara Ruiz Martínez (Teaching Collaborator). Río Hortega Contract. Carlos III Health Institute. Obstetrics and Gynecology Service. Lozano Blesa University Clinical Hospital. Department of Surgery. School of Medicine. Zaragoza's University.

Specific teaching objectives

Research adaptation to clinical practice. Research as a source of knowledge in times of health crisis: experience with the COVID19 pandemic.

Contents

- ? Special features of clinical research
- ? Advantages and difficulties of research in clinical care
- ? Development of clinical research in a health crisis
- ? Importance of clinical research in the absence of knowledge.

3. Research, sexual health and social impact. Reproductive Health and Immigration: Female Genital Mutilation. Psychosomatic gynecology and sexual health.

Teachers:

Mauricio Tajada Duaso (Associate Professor of Health Sciences). Obstetrics and Gynecology Service. Miguel Servet University Hospital. Department of Surgery. School of Medicine. Zaragoza's University.

Belén Carazo Hernández. (Associate Professor in Health Sciences). Obstetrics and Gynecology Service. Lozano Blesa University Clinical Hospital. Department of Surgery. School of Medicine. Zaragoza's University.

Specific teaching objectives

Particularities of research on reproductive health and social implications. Research as a resource of high social benefit.

Sexual health and psychosomatic medicine.

Contents

- ? Psychosomatic gynecology is the part of the specialty that deals with emotional aspects that can happen in situations in the context of both Obstetrics and Gynecology, considers the patient as a whole. The module aims to publicize this part of the specialty of Obstetrics and Gynecology that involves
- ? Female genital mutilation or cutting (FGM) comprises a series of practices consisting of the removal of the external genitalia of girls. Numerous problems and complications related to it have been described. However, the knowledge regarding the physical and psychological effects of FGM is inconclusive since there are very few studies designed to assess the disorders that different types of FGM cause in general health, quality of life and sexual function of the woman.

Session 3. 03/16/2021. Research and advances in gynecological and genetic endocrinology.

4. Research and advances in contraception.

Professor:

José Vicente González Navarro (Associate Professor of Health Sciences). Obstetrics and Gynecology Service. Lozano Blesa University Clinical Hospital. Department of Surgery. School of Medicine. Zaragoza's University.

Specific teaching objectives

Knowledge of new contraceptive methods, especially in hormonal contraception. Updating and updating in the management of hormonal contraception.

Contents

- ? Experience in research on contraception.
- ? Updating and future of contraception.
- ? Particularities of research in sexuality.

5. Research and advances in genetics and epigenetics, fetal programming.

Teachers:

Diego Lerma Puertas (Associate Professor in Health Sciences). Obstetrics and Gynecology Service. Lozano Blesa University Clinical Hospital. Department of Surgery. School of Medicine. Zaragoza's University.

Specific teaching objectives

Introduction to advances in clinical genetics, epigenetics and fetal programming.

Specific teaching objectives

? Clinical genetics, research

? Epigenetics and fetal programming, on the subject of an experience

? Future of genetics in obstetrics.

Session 4. 03/23/2021. Present and future of gynecological endoscopy. Embryonic implantation and development.

6. Present and future of gynecological endoscopy.

Teachers:

Ana Cristina Lou Mercadé (Associate Professor in Health Sciences). Obstetrics and Gynecology Service. Lozano Blesa University Clinical Hospital. Department of Surgery. School of Medicine. Zaragoza's University.

Mercedes Sobreviela Laserrada (Associate Professor of Health Sciences). Obstetrics and Gynecology Service. Lozano Blesa University Clinical Hospital. Department of Surgery. School of Medicine. Zaragoza's University.

Specific teaching objectives

? Training in laparoscopic surgery.

? Its advantages and disadvantages.

? The indications and contraindications.

? The specific surgical material.

? Basic and complex surgical techniques.

? The economic cost of the process.

? Future of endoscopy in gynecology

7. Pathology of implantation and embryonic development

Teachers:

Mercedes Sobreviela Laserrada (Associate Professor of Health Sciences). Obstetrics and Gynecology Service. Lozano Blesa University Clinical Hospital. Department of Surgery. School of Medicine. Zaragoza's University.

Dolores Jiménez Martínez (Associate Professor in Health Sciences). Obstetrics and Gynecology Service. Lozano Blesa University Clinical Hospital. Department of Surgery. School of Medicine. Zaragoza's University.

Specific teaching objectives

? Know the etiopathogenesis and pathophysiology of embryonic implantation.

? Know the pathophysiology of endometrial development.

? Know the diagnostic tools available for the study of the uterine cavity and the endometrium.

? Analyze behavior in different clinical situations. Discuss its diagnostic and therapeutic management

? Initiate students in the investigation of endometrial assessment.

? Concept of uterine and endometrial anatomical normality.

? Current situation and future prospects.

Session 4. 03/30/2021. 21st century challenges: multidisciplinary and personalized medicine.

8. Work in multidisciplinary teams: research and advances in human reproduction and endometriosis:

Teachers:

Miguel Díaz Vega (Associate Professor in Health Sciences). Obstetrics and Gynecology Service. Lozano Blesa University Clinical Hospital. Department of Surgery. School of Medicine. Zaragoza's University.

Ana Cristina Lou Mercadé (Associate Professor in Health Sciences). Obstetrics and Gynecology Service. Lozano Blesa University Clinical Hospital. Department of Surgery. School of Medicine. Zaragoza's University.

Specific teaching objectives

Initiate students in clinical research in the field of Human Reproduction, and that they can acquire a global and updated approach to reproductive pathology from the gynecological and andrological point of view, as well as an update on the knowledge of techniques of assisted reproduction.

Experience of working in multidisciplinary teams

Contents

? Diagnostic study of the sterile / infertile couple.

? Assisted reproduction techniques.

? Research in human reproduction.

? Multidisciplinary teamwork

? Work with patient associations

9. Personalized medicine: Cervical pathology and advances in gynecological oncology. Target therapies, genetic platforms in breast cancer and approaches to cervical cancer.

Teachers:

Yasmina José Gutiérrez Obstetrics and Gynecology Service. Miguel Servet University Hospital. Department of Surgery. School of Medicine. Zaragoza's University.

Specific teaching objectives

To know the cervical lesions that are precursors to cervical cancer and the importance of their prevention, epidemiology of cervical cancer, risk factors, tumor stages and TNM classification, treatment proposed by stages and Oncoguía of the SEGO.

Advances in gynecologic oncology: Basic notions of the main gynecological cancers. As a novelty, the aim is to introduce basic notions of the molecular biology of gynecological cancer, classic carcinogenesis schemes, new advances in the mechanisms that govern the metastatic process, novel aspects of molecular biology such as stem cells, circulating cancer cells in the blood, and micrometastasis. Antidiana treatments (TARGET) existing and in current investigation in relation to these cancers like antiangiogenic therapy (VEGFR inhibitors among others); PARP inhibitors, mTOR inhibitors.

Content:

? Cervical pathology: epidemiology, etiological factors, types of cervical lesions, diagnosis, treatment

? Advances in gynecologic oncology:

? Molecular biology of cancer: carcinogenesis, metastatic processes, stem cells, new anti-target therapies (TARGET)

Session 5. 06/04/2021. Final reflection, doubts and conclusions.

Session dedicated to make a final reflection on the subjects taught, resolution of doubts related to the subjects taught or the preparation and presentation of the directed works. Prof. Daniel Orós.

Session 6.13 / 04/2021. Evaluation and closure.

Final exam.

Presentation of the directed works. Prof. Daniel Orós López

4.4.Course planning and calendar

The subject Research in Gynecology and Human Reproduction will be taught on Tuesdays from March 02 to April 13, 2021.

Starts: March 2, 2020

Completion: April 13, 2020

Final objective test: April 13, 2020

Final objective test (September call): September 3, 2020

Coordinator

Daniel Oros López. Associate Professor of University. (danoros@gmail.com)

Obstetrics and Gynecology Service. Lozano Blesa University Clinical Hospital. Department of Surgery. School of Medicine. Zaragoza's University.

4.5.Bibliography and recommended resources

- BB** [Obstetricia y Ginecología] - Fritz, Marc A.. Endocrinología ginecológica clínica y esterilidad / Marc A. Fritz, Leon Speroff . Edición española de la 8ª ed. de la obra original en lengua inglesa Barcelona : Wolters Kluwer/Lippincott Williams & Wilkins, cop. 2011
- BB** [Obstetricia y Ginecología] - González Merlo, Jesús. Ginecología / J. González-Merlo, J. González Bosquet, E. González Bosquet . 9ª ed. Ámsterdam ; Barcelona ; Madrid [etc.] : Elsevier Masson , 2014
- BB** [Obstetricia y Ginecología] - Obstetricia [6ª ed.] / J. González-Merlo ... [et al.] . 6ª ed. Ámsterdam ; Barcelona ; Madrid [etc.] : Elsevier Masson , 2013