



3.7.8 Research in Endometriosis Group

Publications: 20

Q1: 8

COMPOSITION

Alicia Hernández Gutiérrez. Facultativo Especialista de Área en Ginecología y Obstetricia. Unidad de Ginecología Oncológica. Hospital Universitario La Paz. Profesor Asociado. Universidad Autónoma de Madrid

Pedro N. Barri Soldevilla. Director del Departamento de Obstetricia, Ginecología y Reproducción Humana. Fundación Dexeus Mujer

Covadonga Álvarez López. Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz

Mario Álvarez Maestro. Facultativo Especialista de Área en Urología. Hospital Universitario La Paz

Martina Aida Angelés Fité. Ginecóloga especialista en Oncología. Institut Universitaire Du Cancer de Toulouse

Ónica María Armijo Suárez. Facultativo Especialista de Área en Ginecología y Obstetricia. Unidad de Reproducción Asistida. Hospital Universitario La Paz

María Carbonel López. Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz

Myriam García Segovia. Médico Adjunto en Ginecología. Hospital Universitario La Paz

Juan Antonio García Velasco. Director Médico. IVI - RMA

Silvia Iniesta Pérez. Ginecóloga especialista en Reproducción. Hospital Ruber Internacional

Alejandra Martínez Rodríguez-Marín. Subdirector del Departamento de Oncología Quirúrgica. Institut Universitaire Du Cancer de Toulouse

Ana López Carrasco. Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz

Blanca Martínez Serrano. Facultativo Especialista de Área en Anestesiología. Hospital Universitario La Paz

Cristina Redondo Guisasaola. Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz

Violeta Romero Camacho. Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz

Patricia Isabel Salas Bolivar. Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz

Emanuela Spagnolo. Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz



STRATEGIC OBJECTIVE

Endometriosis is a debilitating gynaecological disease, responsible of pain and infertility with consequent worsening of women's quality of life. The prevalence is estimated on 10% of the fertile age women, with an impact on quality of life and reproductive health. Despite its high prevalence and the great scientific activity generated around this disease, we are facing a problem whose etiology remains unknown. Although it is a chronic illness, which begins to cause symptoms very early in a large number of cases, there is still no predictive marker of the disease, no method of early diagnosis, or any way to modify its clinical course, which is highly variable, producing great uncertainty in affected women. Despite of great advances have been made in the treatment of the disease from a global perspective that included women's fertility and pain control, there is still no etiological treatment or any form of cure.

The endometriosis research group is committed to the following objectives in the next 5 years: to develop a scientific project for FIS 2023, to encourage young researchers, to organize a Master's Degree in Laparoscopy and Endometriosis, to increase the number of final degree projects and final master's projects, to improve the training of gynecological specialty trainee and promote internships abroad, to write publications of the results of our ongoing projects (mainly FIS 2020), to design a website for the HULP- Endometriosis group and to announce monthly workshops of patients with doctors and professionals from the Endometriosis Unit. We also set ourselves the challenge of recognizing the Endometriosis Unit-CSUR (National reference Unit) and promoting gender equality in research and innovation.



The strategies proposed to achieve these objectives are as follows: Participation in the FI-BHULP "Mentor Program", to promote collaboration between senior researcher and junior researcher to carry out research projects, congresses communication, to enable specialist trainee and junior gynecologists to perform the "Winner Project", (an educational program for Endoscopic Gynecological Surgery with 3 levels of progression), to encourage collaboration with providers in the endoscopic sector such as Storz, Olympus and Striker. In addition, we have support from IdiPaz Biostatistics and IdiPAZ Biobank (PT20 / 00004) integrated into the National Network of Biobanks of Spain, technical assistance from the HULP Computer and

Bioengineering Service, as well as active collaboration with national associations of patients and announcement of events in "La Paz Informa".

Moreover, the Endometriosis Unit of Hospital La Paz has numerous strategic alliances, at the national level (Hospital Clínic of Barcelona, Hospital General of Valencia, Clínica Dexeus Barcelona) and also internationally (Oncopole -Oncology Institute of Toulouse (France), University Hospital of Bologna (Italy), University Hospital of Liège (Belgium), University Hospital of Siena (Italy), University Hospital of Malmo (Stockholm)).

RESEARCH LINES

- Investigation of immunological and molecular factors involved in the pathogenesis of endometriosis.
- Investigation of biomarkers to predict the risk of endometriosis malignant transformation. Our objective is to identify a panel of immune system markers and specific genetic mutations to predict endometriosis patients at increased risk of developing ovarian cancer and to identify factors that allow the use of immunotherapy in this type of cancer. In both pathologies (endometriosis and ovarian cancer), the dysfunction of the immune system favours the progression of the disease. In February 2021, the Endometriosis Group received a Health Research Fund by Health Research Institut Carlos III for the project: "Molecular and immunological factors with predictive value in endometriosis associated ovarian cancer".
- Research of new non-hormonal drugs to control symptoms and disease progression.
- Clinical research and new technologies: the advantages of Fluorescence Guided Surgery

(FGS). In our operating rooms (Hospital Maternal, HULP) we use modern technology that allows real-time visualization of certain anatomical structures and helps the surgeon to reduce intraoperative stress and improve performance. Recently, the intraoperative use of indocyanine green (ICG) has shown advantages in intestinal surgery for endometriosis. ICG is a dye that is injected intravenously and rapidly reaches the blood vessels of the abdominal organs and allows the emission of fluorescence in the spectral range of the infrared ray. In this way, the vascularization of the colorectal anastomosis can be assessed after bowel resection in patients with endometriosis. We are currently investigating the use of a macromolecule linked to ICG that allows the dye to remain longer in vascularized tissues (rectum), and with a single injection at the start of surgery. This technique is also useful for delimiting endometriotic nodules before removing them.

- Clinical research focusing on the early diagnosis of endometriosis in adolescent patients (European Multicentre Project: Erasmus Project).

RESEARCH ACTIVITY

● Doctoral theses

Álvarez-Maestro M. Niveles de Tromboxano A2 en la deficiencia androgénica adquirida tras el tratamiento antitumoral de pacientes con cáncer de próstata [dissertation]. Madrid: UAM: 2022(01/04/2022).

Directors: Ferrer Parra M,
Rodríguez de Bethencourt Codés F

Fernández Prada S. Programación de ciclos FIV-ICSI en protocolo antagonista con estrógenos o anticonceptivos orales en fase lútea previa. Comparación de resultados frente a no tratamiento Programación de ciclos FIV-ICSI en protocolo antagonista con estróge-

nos o anticonceptivos orales en fase lútea previa. Comparación de resultados frente a no tratamiento [dissertation]. Madrid: UAM: 2022(15/12/2022).

Directors: Armijo Suárez OM,
Hernández Gutiérrez MA.

Gortázar de las Casas S. Síndrome de resección anterior baja en pacientes intervenidas de endometriosis profunda [dissertation]. Madrid: UAM: 2022(18/10/2022).

Directors: Pascual Migueláñez I,
Hernández Gutiérrez MA.

Spagnolo E. Endometriosis intestinal y complicaciones postoperatorias: el papel de la

cirugía guiada por fluorescencia [dissertation]. Madrid: UAM: 2022(31/05/2022).

Directors: Hernández Gutiérrez MA,
Pascual Migueláñez I.

● Publications

- Ordas P, Spagnolo E, Fernández LGL, Tejada MDD, Lafuente P, Salas P, Carrasco AL, Carbonell M, Hernández A. Comparison of surgical and obstetric outcomes in women with uterine leiomyomas after laparoscopic vs. abdominal myomectomy: A single-center cohort study. *Front Surg.* 2022; 9: 997078. Article. IF: 1.8; Q3
- Spagnolo E, Quevedo IC, de las Casas SG, Carrasco AL, López MC, Migueláñez IP, Gutiérrez AH. Surgeons' workload assessment during in-

docyanine-assisted deep endometriosis surgery using the surgery task load index: The impact of the learning curve. *Front Surg.* 2022; 9: 982922. Article. IF: 1.8; Q3

- de las Casas SG, Migueláñez IP, Spagnolo E, Álvarez-Gallego M, Carrasco AL, López MC, Gutiérrez AH. Quality of life and low anterior resection syndrome before and after deep endometriosis surgery. *Langenbeck Arch Surg.* 2022; 407(8): 3671-9. Article. IF: 2.3; Q2
- Spagnolo E, Mari-Alexandre J, Di Saverio S, Gilbert-Estelles J, Agababyan C, García-Casarrubios P, López A, González-Canto E, Pascual I, Hernández A. Feasibility and safety of transvaginal specimen extraction in deep endometriosis colorectal resectional surgery and analysis of risk factors for postoperative complications. *Tech Coloproctol.* 2022; 26(4): 261-70. Article. IF: 3.3; Q1



1 Introduction

2 Executive Summary

3 Information Groups by Area

4 Associated Clinicians

- de las Casas SG, Spagnolo E, López A, Gregorio LY, Hernández A, Pascual I. Laparoscopic ileocaecal resection with intracorporeal anastomosis for bowel endometriosis-a video vignette. *Colorectal Dis.* 2022; 24(5): 667-8. Letter. IF: 3.4; Q1
- Hernández A, Muñoz E, Ramiro-Cortijo D, Spagnolo E, López A, Sanz A, Redondo C, Salas P, Cristóbal I. Quality of life in women after deep endometriosis surgery: comparison with spanish standardized values. *J Clin Med.* 2022; 11(20): 6192. Article. IF: 3.9; Q2
- Hernández A, Sanz A, Spagnolo E, Carbonell M, Rodríguez E, López A, Raganato R, del Forno S, Ramiro-Cortijo D. Evaluation of women's age and ultrasonographic features to choose surgical treatment for endometriosis associated with ovarian cancer. *J Clin Med.* 2022; 11(9): 2414. Article. IF: 3.9; Q2
- Ángeles MA, Hernández A, Pérez-Benavente A, Cabarrou B, Spagnolo E, Rychlik A, Daboussi A, Migliorelli F, Betrian S, Ferron G, Gil-Moreno A, Guyonj F, Martínez A. The effect of major postoperative complications on recurrence and long-term survival after cytoreductive surgery for ovarian cancer. *Gynecol Oncol.* 2022; 166(1): 8-17. Article. IF: 4.7; Q1
- Heredia-Soto V, Escudero J, Miguel M, Ruiz P, Gallego A, Berjón A, Hernández A, Martínez-Díez M, Zheng SY, Tang J, Hardisson D, Feliú J, Redondo A, Mendiola M. Antitumoral effect of plocabulin in high grade serous ovarian carcinoma cell line models. *Front Oncol.* 2022; 12: 862321. Article. IF: 4.7; Q2
- Betrián S, Ángeles MA, Moreno AG, Cabarrou B, Deslandres M, Ferrón G, Mery E, Floquet A, Guyón F, Pérez-Benavente A, Spagnolo E, Rychlik A, Gladiéff L, Gutiérrez AH, Martínez A. Survival impact of histological response to neoadjuvant chemotherapy according to number of cycles in patients with advanced ovarian cancer. *Int J Gynecol Cancer.* 2022; 32(8): 967-74. Article. IF: 4.8; Q1
- Gallego A, Mendiola M, Hernando B, Berjón A, Cádiz A, Chaves-Urbano B, Heredia-Soto V, Spagnolo E, Gutiérrez AH, Hardisson D, Macintyre G, Redondo A, García MJ. Prognostic markers of inflammation in endometrioid and clear cell ovarian cancer. *Int J Gynecol Cancer.* 2022; 32(8): 1009-16. Article. IF: 4.8; Q1
- Ramón-Patiño JL, Ruz-Caracuel I, Heredia-Soto V, de la Calle LEG, Zagidullin B, Wang YY, Berjón A, López-Janeiro A, Miguel M, Escudero J, Gallego A, Castelo B, Yébenes L, Hernández A, Feliú J, Pelaez-García A, Tang J, Hardisson D, Mendiola

M, Redondo A. Prognosis stratification tools in early-stage endometrial cancer: could we improve their accuracy? *Cancers (Basel).* 2022; 14(4): 912. Article. IF: 5.2; Q2

- Castellano E, Samba C, Estes G, Simpson L, Vendrame E, García-Cuesta EM, López-Cobo S, Álvarez-Maestro M, Lináres A, Leibar A, Ranganath T, Reyburn HT, Martínez-Piñero L, Blish C, Valés-Gómez M. CyTOF analysis identifies unusual immune cells in urine of BCG-treated bladder cancer patients. *Front Immunol.* 2022; 13: 970931. Article. IF: 7.3; Q1
- Hernández A, de Zulueta PR, Spagnolo E, Soguero C, Cristóbal I, Pascual I, López A, Ramiro-Cortijo D. Deep Learning to measure the intensity of indocyanine green in endometriosis surgeries with intestinal resection. *J Pers Med.* 2022; 12(6): 982. Article. Not Indexed
- Brandao P, Pellicer A, Meseguer M, Remohi J, Garrido N, García-Velasco JA. COVID-19 mRNA vaccines have no effect on endometrial receptivity after euploid embryo transfer. *Reprod Biomed Online.* 2022; 45(4): 688-695. Article. IF: 4; Q1
- Rodríguez-Rodero S, Morales-Sánchez P, Tejedor JR, Coca-Pelaz A, Mangas C, Penarroya A, Fernández-Vega I, Fernández-Fernández L, Álvarez-López CM, Fernández AF, Álvarez MA, Astudillo A, Alarcón PP, Ragnarsson C, Alonso AC, Rivas HET, Tapia JPR, Torrero SN, Pedroche-Just Y, Zapata RMR, Rodríguez-García AM, Abo A, Balbin M, Menéndez E, Delgado E, Fraga MF. Classification of follicular-patterned thyroid lesions using a minimal set of epigenetic biomarkers. *Eur J Endocrinol.* 2022; 187(3): 335-47. Article. IF: 5.8; Q1
- Toribio-Vázquez C, Rivas JG, Yebesa A, Carrión DM, Barradod MY, Álvarez-Maestro M, Piñero LM. New strategies for decision making in prostate cancer. The role of oncotype. *Actas Urol Esp.* 2022; 46(7): 385-6. Editorial Material. IF: 1.1; Q4
- Arora A, Zugail AS, Pugliesi F, Cathelineau X, Macek P, Barbe Y, Karnes RJ, Ahmed M, Di Trapani E, Soria F, Álvarez-Maestro M, Montorsi F, Briganti A, Necchi A, Pradere B, D'Andrea D, Krajewski W, Roumiguie M, Bajot AS, Hurler R, Contieri R, Carando R, Teoh JYC, Roupret M, Benamran D, Ploussard G, Mir MC, Sánchez-Salas R, Moschini M. Neoadjuvant chemotherapy does not increase peri-operative morbidity following radical cystectomy. *World J Urol.* 2022; 40(7): 1697-705. Article. IF: 3.4; Q2
- Spagnolo E, Zapardiel I, Gorostidi M. Role of fluorescence imaging for intraoperative intestinal assessment in gynecological surgery: a systematic review. *Minim Invasiv Ther.* 2022; 31(7): 992-9. Review. IF: 1.7; Q3

- Palacios MNC, Pineda VG, Segovia MG, Tejeda MDD, Gutiérrez AH, Gutiérrez IZ. Utility of indocyanine green as a single tracer for sentinel node biopsy in endometrial cancer. *J Obstet Gynaecol Re.* 2022; 48(1): 222-9. Article. IF: 1.6; Q4

● Research projects

Hernández Gutiérrez A. Factores inmunológicos en la transformación maligna de la endometriosis. FIBHULP. 2018-Ongoing.

Management centre: FIBHULP

Hernández Gutiérrez A. Identificación de factores inmunológicos y moleculares con valor pronóstico en cáncer de ovario asociado a endometriosis e implicados en el potencial de malignización de la endometriosis (PI20/01368). FIBHULP. 2021-2023.

Management centre: FIBHULP

Hernández Gutiérrez A. Implementación de técnicas basadas en "deep learning" para medir la intensidad del verde de indocianina en la cirugía de la endometriosis con resección intestinal. FIBHULP. 2022-Ongoing.

Management centre: FIBHULP

● Clinical trials

Álvarez López C. Análisis de las propiedades psicométricas de un cuestionario de calidad de vida específico para mujeres con sangrado menstrual abundante (sma).

Type: No EPA. PI-5191.

Sponsored by: Hologic Iberia S.L.

Signed date: 28/03/2022

Álvarez López C. Análisis de las propiedades psicométricas de un cuestionario de calidad de vida específico para mujeres con sangrado menstrual abundante (sma).

Type: No EPA. PI-5191.

Sponsored by: Hologic Iberia S.L.

Signed date: 13/09/2022

