

2021

Memoria de Indicadores Bibliométricos

Biblioteca
Hospital Universitari Dexeus
Grupo Quirónsalud



Foto : Dani Olea

Eva Salas Ollé
Documentalista



- Fuentes e Indicadores bibliométricos

- Documentos indexados en: WOS/
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- Indicadores bibliométricos globales

Fuentes de información empleadas

- **Web of Science (WoS):** Plataforma de la empresa Clarivate Analytics, formada por una amplia colección de bases de datos bibliográficas, citas y referencias de publicaciones científicas de cualquier disciplina del conocimiento, en ciencia, tecnología, ciencias sociales, artes y humanidades. Proporciona información bibliográfica, que permite evaluar, analizar el rendimiento y la calidad científica de la investigación.
- **Journal Citation Reports (JCR):** Base de datos multidisciplinar realizada por el Institute for Scientific Information (ISI), que permite de manera sistemática y objetiva, mediante datos estadísticos, determinar la importancia relativa de revistas dentro de sus categorías temáticas. Ofrece un amplio espectro de aplicaciones bibliométricas prácticas para los profesionales de la información. Su cobertura desde 1997 abarca más de 200 disciplinas. Incluye, entre otros indicadores, el conocido **Factor de Impacto, el cuartil** que ocupa la revista y la posición de la revista dentro de su categoría; que son los datos solicitados por las agencias de evaluación de la actividad investigadora para la valoración de las publicaciones en artículos de revista. Permite identificar la relevancia que tiene una revista dentro de la comunidad investigadora a través de indicadores, el **índice de inmediatez** (Immediacy index) o la **vida media cuando es citada** (Cited Half-Life), que giran en torno a las citas recibidas.
- **Science Citation Index Expanded (SCIE):** Es una base de datos documental donde se recogen todas las contribuciones (artículos, editoriales, cartas, revisiones, discusiones, etc.) que se pueden publicar en las revistas de ciencia y tecnología indizadas por Clarivate Analytics. Indexa alrededor de 9.200 de las revistas con mayor impacto de todo el mundo líderes en 178 disciplinas científicas (más de 53 millones de registros y 1.18 billones de referencias citadas desde 1900 hasta la actualidad).
- **Emerging Source Citation Index (ESCI):** Base de datos dónde están todas las revistas que en la práctica están siendo evaluadas para entrar a formar parte de las bases de datos de **Web of Science Core Collections** (*Science Citation Index, Social Science Citation Index (SSCI) y Arts & Humanities Citation Index (AHCI)*). Son revistas que a pesar de tener una alta calidad en su disciplina, pertenecen a un área de conocimiento muy restringida para obtener un factor de impacto.
- **Essential Science Indicators (ESI):** Herramienta que proporciona indicadores a nivel mundial para conocer las tendencias en investigación científica, usando los artículos más citados en los últimos 10 años (**highly cited papers**) y los más citados en los últimos dos años (**hot papers**). Según elijamos la vista de 2 o 10 años, se puede obtener una lista por campos de investigación, autor, institución, país / territorio o publicación. Esta lista se puede ordenar por el número de documentos en Web of Science, según el recuento de citas o promedio de citas por artículo.
- **InCites Benchmarking & Analytics:** Herramienta de evaluación de la investigación basada en citas que recoge, analiza y compara la producción científica incluida en la Web of Science desde 1980 hasta la actualidad. Permite comparar aspectos cualitativos y cuantitativos del rendimiento investigador con otras instituciones, monitorizar la colaboración científica y generar nuevas oportunidades de colaboración, identificar las tendencias más influyentes en el ámbito investigador, y mostrar las fortalezas y descubrir áreas de oportunidad.
- **SCImago Journal Rank (SJR):** Es una herramienta de medición de la influencia científica de las revistas académicas según el número de citas en otros medios y periódicos o revistas de importancia. El valor de medida

es la referencia bibliográfica. El índice SJR de una revista es un valor numérico que indica el número medio de citas ponderadas recibidas durante un año seleccionado por documentos publicados en esa revista durante los tres años previos. Los valores más altos del índice SJR indican el prestigio del medio o revista en el que se ha publicado.

- **Wizdom:** Es un software de gestión de investigación gratuito para investigadores, académicos y estudiantes. Puede buscar, agregar y administrar publicaciones de manera personalizada. Ayuda a determinar los puntos calientes emergentes y las tendencias de investigación en cada campo. Identifica investigadores e instituciones que están a la vanguardia de cada área de investigación para la colaboración entre científicos.

Indicadores bibliométricos utilizados

- **Número de trabajos solamente indexados en PubMed:** Base de datos de la *National Library of Medicine (NLM)*, de libre acceso que recopila citas y resúmenes de artículos de investigación biomédica, que incluye: artículos, revisiones, artículos In Press, referencias de libros, actas de congresos....
- **Número de trabajos citables en Science Citation Index Expanded (SCIE):** Índice multidisciplinar de la literatura de revistas de ciencias de trabajos indexados sumando las siguientes tipologías documentales: artículos, revisiones, In Press y cartas. Scopus: Número de trabajos indexados sumando solo estas tres tipologías documentales: artículos, revisiones y conferencias.
- **Número de trabajos citables en Emerging Source Citation Index (ESCI):** Base de datos dónde están las revistas que están siendo evaluadas para ingresar en WOS. Tienen una alta calidad en su disciplina, pero pertenecen a un área del conocimiento muy restringida para obtener un factor de impacto.
- **Número de trabajos citables en Social Sciences Index (SSCI):** Índice multidisciplinar que indexa las publicaciones de 50 disciplinas académicas en ciencias sociales, desde 1988 hasta la actualidad.
- **Número y porcentaje de trabajos indexados por Cuartiles del Journal Citation Report:** Trabajos publicados en revistas con Factor de Impacto, situadas en el primer, segundo, tercero y cuarto cuartil de las categorías de Journal Citation Report

Identificación del tipo de indexación :

Artículo Indexado en: PubMed

Artículo Indexado en: PubMed/ Web of Science (WOS)/Journal Citation Reports (JRC)/ Science Citation Index Expanded (SCIE).

Artículo Indexado en: PubMed/ Web of Science (WOS)/Journal Citation Reports (JRC)/ Emerging sources Citation Index (ESCI).

Artículo Indexado en : PubMed/ Web of Science (WOS)/Journal Citation Reports (JRC)/ Social Sciences Citation Index (SSCI)

Introducción

Este informe de la Biblioteca del Hospital Universitari Dexeus. Grupo Quirónsalud (**HUDQ**), tiene como finalidad gestionar un entorno de información en continua evolución, para contribuir al aprendizaje, la investigación y la innovación de nuestro centro, mediante estrategias y servicios de excelencia, de forma sostenible y socialmente responsable, que promuevan la generación y transferencia del conocimiento.

En este contexto, la Biblioteca presenta la Memoria de Indicadores Bibliométricos del 2021 con el objetivo de contribuir a la mejora de la gestión y visibilidad de la investigación científica de nuestro Hospital.

Este documento resume el volumen e impacto de la producción científica del **HUDQ** recogida en la Web of Science (WoS). Esta base de datos cubre el periodo 1980-2021, centrándonos en algunos de los indicadores en el tramo del 2021 exclusivamente.

Se divide en cuatro grandes bloques: documentos indexados en WoS, artículos destacados, factor de impacto de la investigación por servicios y los indicadores bibliométricos globales.

Recopilamos y presentamos los artículos científicos publicados por nuestros profesionales, en los que aparece como mínimo un autor cuya filiación sea del **HUDQ**, y esten indexados a todo el 2021, además de que el documento este por lo menos en alguna de las siguientes bases de datos: **PubMed/Scopus/Web of Science (WOS)/Journal Citation Reports (JCR)**.

Destacamos los indicadores bibliométricos adjudicados a cada artículo por Servicios (Factor de Impacto, Factor de Impacto Medio, Quartil, y Posición de la revista) que les corresponden en la base de datos **Journal Citation Reports (JCR) 2020**, es necesario evaluar que estos valores son aproximados, ya que los definitivos para el 2021 estarán disponibles el próximo mes de julio del 2022.

En el informe se incluyen los artículos con las etiquetas ***Ahead of print y Online ahead of print*** de **PubMed**, hemos ido modificando posteriormente cuando ya han sido indexados de nuevo a lo largo del año, momento en el que están publicados definitivamente en la revista y no únicamente en formato ***ahead of print***.

La memoria recoge los artículos publicados en el periodo que va del **1 de enero al 31 de diciembre del 2021**. Nos gustaría que este primer análisis de la información científica sea del interés y de apoyo a la Investigación de nuestros profesionales a través de la recogida y preservación de los trabajos que realizan, creando nuevas estrategias de publicación, además de contribuir a mejorar el impacto y visibilidad de la actividad científica del **Hospital Universitario Dexeus**.

AL.LERGOLOGIA

Nº Artículos indexados: 3

Factor de Impacto total: 9.183

Factor impacto medio x artículo: 3.061

Valero CB, **Monzón AC**, Menchón NM, Martorell A, Aragonés L, Magán CG, Fernández SP, Fernández CP, Gibert MP, Del Prado AP, Navarrete LV, Ortiz MV, Zudaire LE.

Practical protocol of the food allergy committee of the seicap on open oral food challenges to nuts.

Allergol Immunopathol (Madr). 2021 Nov 1;49(6):56-59. doi: 10.15586/aei.v49i6.474. eCollection 2021.

Food allergy is rising rapidly among children, and allergy to nuts is one of the most prevalent allergies among them. The category "nuts and seeds" include several plant foods from different botanical families, very different from each other. It is not uncommon to detect co-sensitization to different nuts. However, true co-allergy is less frequent. Up to 80% of patients with positive skin prick tests or specific IgE without true history of reaction who avoid certain nuts, might tolerate them in an Oral Food Challenge (OFC). Although molecular diagnostic techniques help to improve nut allergy diagnosis, OFC still remains the gold standard. For this reason, after reviewing the current bibliography and the recommendations of different allergy societies on standardization of open OFC, the Food Allergy Committee of the Spanish Society of Pediatric Allergy, Asthma and Clinical Immunology (SEICAP) food allergy working group proposed a unified protocol to undertake these OFC, which include preliminary recommendations, unification of total dose, number of doses and interval between doses. Additionally, this group offers an interactive table to facilitate calculation of doses specific to each nut under study.

Indexado en: PubMed/WOS/JCR/JCI/ Science Citation Index Expanded (SCIE)

Factor de Impacto: 1.667

Quartil:4

Categoría: Allergy; Immunology

Posición: Allergy 24/28; Immunology 150/162

Boné Calvo J, Clavero Adell M, Guallar Abadía I, Laliena Aznar S, Sancho Rodríguez ML, **Claver Monzón A**, Aliaga Mazas Y.

As soon as possible in IgE-cow's milk allergy immunotherapy.

Eur J Pediatr. 2021 Jan;180(1):291-294. doi: 10.1007/s00431-020-03731-3. Epub 2020 Jul 11.

Oral immunotherapy is a common treatment in cow's milk protein allergy. The Department of Pediatric Allergology at the Children's Hospital of Zaragoza performed a retrospective analysis of 335 infants under 1 year of age diagnosed with IgE-mediated cow's milk and early treated. Clinical evaluation, skin prick test, and serum-specific IgE level control were performed before starting and after finishing treatment. Upon completion of treatment, more than 98% of patients became tolerant to milk and no one presented serious adverse reactions. Nowadays, the remaining non-tolerant patients (1.8%) can take milk or derivatives daily-as prophylaxis-to a certain maximum dose and still remain asymptomatic. After immunotherapy, both positive skin prick tests and a progressive decrease in specific IgE levels were found, as desensitization to milk increased. Conclusion: Oral immunotherapy is a safe and effective treatment against allergy to cow's milk proteins in infants. Such treatment should be offered to the children's families from the first moment of diagnosis. What is known: • Cow's milk proteins are responsible for the earliest IgE-mediated allergic reactions in children. • Oral immunotherapy (OIT) is commonly used as cow's milk allergy treatment and it is proposed at different ages. What is new: • OIT it is an effective and safe method with no severe reactions at early ages. • The number of reaching successful treatments is awesome so we believe that immunity response can be molded at the first months of life, so the probability of success with infants is greater than in older children.

Indexado en: PubMed/WOS/JCR/JCI/ Science Citation Index Expanded (SCIE)

Factor de Impacto: 3.183

Quartil:1

Categoría: Pediatrics

Posición: 28/129

Martí-Garrido J, Vázquez-Revuelta P, **Leonart-Bellfill R**, Molina-Mata K, Muñoz-Sánchez C, Madrigal-Burgaleta R.

Pilot Experience Using Drug Provocation Testing for the Study of Hypersensitivity to Chemotherapy and Biological Agents.

J Investig Allergol Clin Immunol. 2021 Apr 20;31(2):166-168. doi: 10.18176/jiaci.0552. Epub 2020 Jun 23.

Indexado en: PubMed/WOS/JCR/JCI/ Science Citation Index Expanded (SCIE)

Factor Impacto: 4.333

Quartil: 2

Categoría: Allergy; Immunology

Posición: Allergy 13/28; Immunology 77/162

ANATOMIA PATOLOGICA

Nº Artículos indexados: 6

Factor de Impacto total: 7.428

Factor impacto medio x artículo: 1.238

Civit JJR, Godoy D, Conde A, Arencibia J, Medel R, Limeres MA, Miguel IS, Marín JD, Aguilar Y, **Tresserra F**, Medina F.

Orbital histiocytosis with systemic involvement: A case with complex affiliations.

Saudi J Ophthalmol. 2021 Jul 29;34(4):319-323. doi: 10.4103/1319-4534.322613. eCollection 2020 Oct-Dec.

A 70-year-old male presented with orbital masses affecting the muscular cone. His past medical history was notable for diabetes mellitus, ischemic cardiopathy, sleep-apnea syndrome, and multiple serous effusions. The first biopsy specimen of affected orbital tissue revealed fibrohistiocytic infiltration resembling xanthogranuloma or Erdheim-Chester disease (ECD). An ulterior biopsy of affected orbital tissue showed lymphocyte emperipolesis with immunopositivity for CD68 and S100 but negative staining for CD1a marker, strongly suggesting Rosai-Dorfman disease (RDD). Afterward, pericardium and peritoneal effusions resulted in constrictive pericarditis and retroperitoneal fibrosis, respectively. The absence of distinctive clinical features made the diagnosis especially challenging. Attempts to control the disease using corticosteroids, radiation, orbital surgery, and interferon were unsuccessful. Aggressive treatments such as chemotherapy were not considered appropriate due to the general deterioration of our patient. Although the possibility of two concurrent diseases (e.g., systemic ECD and orbital RDD) cannot be discarded, we interpreted the orbital findings as likely due to RDD, and the entire condition of our patient as an extranodal RDD with atypical clinicopathological findings and outcome.

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Indexado en: PubMed/WOS/JCR/JCI/Emerging sources Citation Index (ESCI)

Journal Citation Index: 0.31

Quartil: 4

Categoría: Ophthalmology

Posición: 75/89

Coll S, Feliu S, Montero C, Pellisé-Tintoré M, **Tresserra F**, Rodríguez I, Barri-Soldevila PN.

Evolution of laparoscopic myomectomy and description of two hemostatic techniques in a large teaching gynecological center.

Eur J Obstet Gynecol Reprod Biol. 2021 Aug 26;265:181-189. doi: 10.1016/j.ejogrb.2021.08.023. Online ahead of print.

OBJECTIVE: To provide a description of laparoscopic myomectomy and the two hemostatic techniques performed over the last 11 years in a single reference center for gynecology and obstetrics and to evaluate the factors associated with favorable surgical outcomes. **STUDY DESIGN:** We retrospectively analyzed 625 who underwent laparoscopic myomectomy from January 2009 to December 2019. **RESULTS:** Of 625 patients, 437 (69.8%) were symptomatic. The most common symptoms were heavy uterine bleeding (33.2%). 188 patients (30.1%) were asymptomatic but were operated in 77 cases (12.3%) for rapid fibroid growth, 32 (5.1%) for uterine cavity distortion and, in 45 cases (8.6%), the myomectomy was indicated during a surgery for other medical reason due to its accessibility. In 173 cases (27.9%) intramyometrial adrenaline was injected and in 246 cases (39.7%) a temporary blockage of the uterus blood supply was performed. Only 35 (5.6%) patients presented complications, of which, 14 (40%) were hemorrhagic. These hemorrhagic complications were more frequent when intramyometrial adrenaline was used (5,8%) than after the temporary clipping of the uterine arteries and infundibulopelvic ligaments (0,8%; $p < 0,001$). In the multivariate logistic regression model, the only factor statistically associated with favorable surgical outcome was the use of temporary clipping of the uterine arteries at their origin and infundibulopelvic ligaments as hemostatic technique during the surgery. **CONCLUSION:** Laparoscopic myomectomy was generally safe with a high level of favorable outcomes. The

temporary clipping of uterine arteries and infundibulopelvic ligaments presented fewer intraoperative bleedings compared with injecting intramyometrial adrenaline.

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Indexado en: PubMed/WOS/JCR/ JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 2.435 **Quartil:** 3 **Categoría:** Obstetrics & Gynecology ; Reproductive Biology

Posición: Obstetrics & Gynecology 49/83; Reproductive Biology 22/30

Malapelle U, Pepe F, Pisapia P, Altimari A, Bellevicine C, Brunnström H, Bruno R, Büttner R, Cirnes L, De Andrea CE, de Biase D, Dumur CI, Ericson Lindquist K, Fontanini G, Gautiero E, Gentien D, Hofman P, Hofman V, Iaccarino A, Lozano MD, Mayo-de-Las-Casas C, Merkelbach-Bruse S, Pagni F, Roman R, Schmitt FC, Siemanowski J, Roy-Chowdhuri S, Tallini G, **Tresserra F**, Vander Borgh S, Vielh P, Vigliar E, Vita GAC, Weynand B, Rosell R, Molina Vila MA, Troncione G.

Reference standards for gene fusion molecular assays on cytological samples: an international validation study.

J Clin Pathol. 2021 Aug 24;jclinpath-2021-207825. doi: 10.1136/jclinpath-2021-207825. Online ahead of print.

AIMS: Gene fusions assays are key for personalised treatments of advanced human cancers. Their implementation on cytological material requires a preliminary validation that may make use of cell line slides mimicking cytological samples. In this international multi-institutional study, gene fusion reference standards were developed and validated. **METHODS:** Cell lines harbouring EML4(13)-ALK(20) and SLC34A2(4)-ROS1(32) gene fusions were adopted to prepare reference standards. Eight laboratories (five adopting amplicon-based and three hybridisation-based platforms) received, at different dilution points two sets of slides (slide A 50.0%, slide B 25.0%, slide C 12.5% and slide D wild type) stained by Papanicolaou (Pap) and May Grunwald Giemsa (MGG). Analysis was carried out on a total of 64 slides. **RESULTS:** Four (50.0%) out of eight laboratories reported results on all slides and dilution points. While 12 (37.5%) out of 32 MGG slides were inadequate, 27 (84.4%) out of 32 Pap slides produced libraries adequate for variant calling. The laboratories using hybridisation-based platforms showed the highest rate of inadequate results (13/24 slides, 54.2%). Conversely, only 10.0% (4/40 slides) of inadequate results were reported by laboratories adopting amplicon-based platforms. **CONCLUSIONS:** Reference standards in cytological format yield better results when Pap staining and processed by amplicon-based assays. Further investigation is required to optimise these standards for MGG stained cells and for hybridisation-based approaches.

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Indexado en: PubMed/WOS/JCR/ JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 3.411 **Quartil:** 2 **Categoría:** Pathology **Posición:** 30/77

Marco V, Garcia F, Rubio IT, Soler T, Ferrazza L, Roig I, Mendez I, Andreu X, Mínguez CG, **Tresserra F**.

Adenoid cystic carcinoma and basaloid carcinoma of the breast: A clinicopathological study.

Rev Esp Patol. 2021 Oct-Dec;54(4):242-249. doi: 10.1016/j.patol.2020.09.005. Epub 2020 Dec 31.

Adenoid cystic carcinoma of the breast (ACCB) is a rare triple negative tumor (TNT) with an excellent prognosis in most cases. Three different histologic types are recognized: classic ACCB, solid basaloid ACCB (SB-ACCB), and ACCB with high-grade transformation. A majority of these tumors show characteristic molecular and immunohistochemical (IHC) features, with fusion of MYB and NFIB genes and overexpression of MYB, respectively. Basaloid carcinomas of the breast (BCB) are infrequently described. They resemble SB-ACCB and TNT of no special type (TNT-NST). We have studied the clinicopathological features of 17 ACCB and 9 BCB, investigating the expression of MYB by IHC and the rearrangements of MYB by fluorescence in situ hybridization

(FISH). MYB was expressed by IHC in 15 ACCB and in 3 BCB. MYB FISH detected rearrangements in 11 ACCB and in 2 BCB. After a mean follow-up of 90 months, with a range of 12-204 months, 2 patients with ACCB with high-grade transformation and 1 patient with BCB developed metastases and died of disease. In summary, most ACCB have a good prognosis, but tumors with adverse histopathological features may metastasize. BCB may overlap with ACCB and TNT-NST, and their prognosis should be further studied.

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Indexado en: PubMed

Sánchez-Prieto M, Fargas F, **Tresserra F**, González-Cao M, Baulies S, Fábregas R.

Surgical Management of Vulvar Melanoma: A Case Series.

Case Rep Oncol. 2021 Jul 20;14(2):1144-1151. doi: 10.1159/000517820. eCollection 2021 May-Aug.

Vulvar malignant melanoma is the second most common subtype of vulvar cancer, accounting for 5-10% of all vulvar cancers. The prognosis is still very poor, although some advances have been achieved in the last years. One of the most significant changes in its management has been the development of less invasive surgical techniques that diminish the risk of postoperative morbidity and long-lasting sequelae. In this article, we review the surgical management of the pathology, based on the comment of 3 cases with vulvar melanoma treated at our institution.

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Indexado en: PubMed/WOS/JCR/ JCI/ JCI/Emerging sources Citation Index (ESCI)

Journal Citation Index: 0.20

Quartil: 4

Categoría: Oncology

Posición: 271/309

Tresserra F, Temprana J, Vasquez C, Lloveras B, Català I, Tarroch X, Combalia N, Alameda F, Bosch R, Gallardo J, Mancebo E, **Fabra G**, Dinares MC, Santacana M, Gonzalez C, Pérez-Ochoa F.

Developing indicators for quality assurance in cytopathology. Catalan Society of Cytopathology.

Diagn Cytopathol. 2021 Feb;49(2):273-286. doi: 10.1002/dc.24639. Epub 2020 Oct 19.

BACKGROUND: Quality control in cytology must be established through reliable and easily measurable indicators. **METHODS:** From the Catalan Society of Cytopathology a group of experts has been established to write a document with 13 indicators that cover the entire cytological process, based on its Cytopathology Quality Guide. It has been elaborated through guides and documents with scientific evidence and DELPHI methodology in order to reach a structured consensus on the opinions of a group of experts. **RESULTS:** Thirteen indicators, covering all the cytologic process are expressed in worksheets specifying all their characteristics. **CONCLUSION:** This document allows the control of all stages of the cytological process.

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Indexado en: PubMed/WOS/JCR/ JCI/ Science Citation Index Expanded (SCIE)

Factor Impacto: 1.582

Quartil: 4

Categoría: Medical Laboratory Technology; Pathology

Posición: Medical Laboratory Technology 20/32; Pathology 54/89

ANESTESIOLOGIA

Nº Artículos indexados: 3

Factor de Impacto total: 4.123

Factor impacto medio x artículo: 1.374

Campillo-Recio D, Ibañez M, Martín-Dominguez LA, Comas-Aguilar M, **Fernández-Morales M**, Alberti-Fito G.
Local Percutaneous Radiofrequency for Chronic Plantar Fasciitis.
Arthrosc Tech. 2021 Apr 18;10(5):e1315-e1320. doi: 10.1016/j.eats.2021.01.031. eCollection 2021 May.

Plantar fasciitis is the most common cause of heel pain. It accounts for 80% of the cases and has an estimated prevalence rate of up to 7% in the general population, with bilateral involvement in 20% to 30% of those patients. This condition affects people of working age, thereby limiting and diminishing their quality of life. There are a wide range of treatment options for the management of plantar fasciitis that include both conservative and surgical treatments. Although surgical treatment based on partial or total plantar fascia release has success rates of some 70% to 90%, it is not free of complications. These complications, soft-tissue healing problems, superficial infection, or longitudinal arch collapse in cases of a greater than 40% release of the fascia. Bipolar radiofrequency appears to be a safe procedure for refractory plantar fasciitis that can provide outcomes equivalent to open plantar fascia release with less morbidity. The purpose of this article is to describe the local percutaneous radiofrequency technique for patients with chronic, recalcitrant plantar fasciitis.

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Indexado en: PubMed/WOS/JCR /JCI/ Emerging sources Citation Index (ESCI)

Journal Citation Index: 0.42

Quartil: 3

Categoría: Orthopedics

Posición: 85/119

Cáncer Requeno G, **Farreras Margenat A**, **Homs Riera M**, **Boliart de San Félix Y**.
Diaphragmatic fracture vs. Phrenic paralysis after debulking surgery.
Rev Esp Anestesiología y Reanimación. 2021 Sep 23;S0034-9356(21)00166-3. doi:10.1016/j.redar.2021.03.015. Online ahead of print. [Article in English, Spanish]

Indexado en: PubMed

Ramírez-Paesano C, Juanola Galceran A, **Rodiera Clarens C**, Gilete García V, Oliver Abadal B, Vilchez Cobo V, Ros Nebot B, Julián González S, Cao López L, Santaliestra Fierro J, Rodiera Olivé J.
Opioid-free anesthesia for patients with joint hypermobility syndrome undergoing craneo-cervical fixation: a case-series study focused on anti-hyperalgesic approach.
Orphanet J Rare Dis. 2021 Apr 13;16(1):172. doi: 10.1186/s13023-021-01795-4.

BACKGROUND: Patients with Ehlers-Danlos Syndrome/Hypermobility Type (EDS-HT/JHS) and Craneo-Cervical Instability frequently suffer from severe widespread pain which is difficult to control. Chronic neuroinflammation, opioid-induced hyperalgesia, and central sensitization may explain this painful condition. The aim of this study was to determine if opioid-free anesthesia plus the postoperative administration of lidocaine, ketamine and dexmedetomidine can reduce postoperative pain and the need of methadone rescues in comparison with opioid-based management in these patients undergoing Craneo-Cervical Fixation (CCF). The secondary aim was to assess the needs of opioids at hospital-discharge, incidence of gastrointestinal complications and the requirement of anxiolytic. **METHODS:** A retrospective, consecutive case series study was designed. 42 patients with EDS-HT/JHS undergoing CCF were enrolled in two groups: an OFA-plus Group that received opioid-free anesthesia with propofol, lidocaine, ketamine and dexmedetomidine, and OP Group, opioid-based anesthesia-analgesia. The main variables: Preoperative Visual Analogue Score (VAS), postoperative VAS on the 1st, 2nd, 4th and 6th days, sufentanil or morphine requirements, need for methadone rescue, and VAS at hospital-discharge. Data was presented by mean \pm SD, percentage, median or interquartile range. Chi-

squared or Fisher's test. 95% C.I and P values < 0.05. **RESULTS:** Nineteen patients in OFA-plus, and 23 patients in OP group. VAS was lower in OFA-plus on the postoperative days evaluated ($p < 0.001$). VAS at hospital-discharge was lower in OFA-plus: 4.96 (4.54-5.37) vs. OP 6.39 (6.07-6.71) ($p < 0.001$). Methadone requirement was lower in the OFA-plus ($p < 0.001$). 78% of patients in OFA-plus didn't need methadone rescue. 95% in OP group needed methadone rescues at high doses (> 15 mg/day). No differences regarding equivalent doses of sufentanil or morphine consumption on the 2nd, 4th, and 6th postoperative days were found. OFA-plus decreased ileus, nausea and vomiting ($p < 0.001$). 60.9% in OFA-plus group decreased opioid requirements at hospital-discharge compared with preoperative values. A 77% reduction of anxiolytics requirements was shown. **CONCLUSION:** OFA-plus management for patients undergoing CCF with EDS-HT/JHS shows significant reduction in postoperative pain and at hospital-discharge compared with opioid-based anesthesia. OFA-plus management decreases the total doses of methadone rescues, reduces anxiolytic requirements and gastrointestinal side-effects, except for constipation. OFA-plus management is a feasible option to improve postoperative pain control, reducing the opioids' use and their postoperative side-effects in patients undergoing CCF with EDS-HT/JHS.

Indexado en: PubMed/WOS/JCR/JCI/ Science Citation Index Expanded (SCIE)

Factor Impacto: 4.123

Quartil: 2

Categoría: Genetics & Heredity; Medicine, Research & Experimental

Posición: Genetics & Heredity 64/175; Medicine, Research & Experimental 67/140

CARDIOLOGIA

Nº Artículos indexados: 4

Factor de Impacto total: 36.199

Factor impacto medio x artículo: 9.049

Rivasi G, **Ungar A**, **Moya A**, Brignole M, Sutton R, Fedorowski A.

Syncope: new solutions for an old problem.

Kardiol Pol. 2021;79(10):1068-1078. doi: 10.33963/KP.a2021.0138.

Syncope is a frequent event in the general population. Approximately 1%-2% of all emergency department admissions are due to syncope and at least one third of all people experience fainting in their life. Although consequences of cardiac syncope are generally feared, non-cardiac syncope is much more common and may be associated with severe injuries and quality of life impairment, particularly in older adults. Various diagnostic and therapeutic strategies have been created and implemented over decades, leading to significant improvements in diagnostic accuracy and treatment effectiveness. In recent years, diagnosis and treatment have further evolved according to an innovative approach focused on the hemodynamic mechanism underlying syncope, based upon the assumption that knowledge of syncope mechanism is a prerequisite for effective syncope prevention and treatment. Therefore, a new classification of syncope has been proposed, which defines two main syncope phenotypes with different predominant mechanisms: the hypotensive phenotype, where hypotension or vasodepression prevails, and the bradycardic phenotype, where cardioinhibition prevails. Identification of syncope phenotype - bradycardic or hypotensive/vasodepressive - represents the first step towards a personalized management of syncope, characterized by customized interventions for prevention. The present review is aimed at illustrating these new developments in diagnosis and therapy of non-cardiac syncope within a mechanism-based perspective. Diagnosis and therapy of bradycardic and hypotensive phenotypes are discussed, with a focus on recent evidence.

Indexado en: PubMed/WOS/JCR / JCI/ Science Citation Index Expanded (SCIE)

Factor Impacto: 3.108

Quartil: 2

Categoría: Cardiac & Cardiovascular Systems

Posición: 70/141

Romaguera R, Ojeda S, Cruz-González I, Moreno R; collaborators of the ACI-SEC; REGISTRY COLLABORATORS.

Collaborators: Rasco AG, Gutiérrez-Barrios A, Gómez-Menchero A, Ponce FJM, Burguillos FJS, Oneto J, Borrego JC, Gila JS, Ramírez JAB, Fernández JC, Briales JHA, García LAÍ, Arellano MV, Molina RF, Ojeda S, Ojeda S, Lezo JS, García LAÍ, Fernández RG, Freire SJC, Pradas SMB, Lozano I, Avanzas P, Bango MJ, Ojeda FB, Cabrera FMJ, Lorenzo PM, González RP, Rihawi ZK, Zueco J, Pérez IS, Jiménez-Mazuecos J, García EN, Burgos JM, Prado AP, Cruz-González I, Amat-Santos IJ, Alonso JR, Vaquerizo B, **Blanco BGD**, Peligero EB, Roura G, Mohandes M, Bassaganyas J, Casanova-Sandoval JM, Sabaté M, Suárez XC, Picart JG, Camacho JFM, Garrido JC, Sanchis J, Jofresa AB, Jofresa AB, García AF, Domingo FP, Saura FT, Gil JLD, Nodar JMR, Valero MJ, Aguar P, Tejedor P, Palop RL, Palop RL, Palop RL, Portales JF, Portales JF, Portales JF, Nouche RT, Santos RC, Ocaranza R, Peña G, Jaume AG, Bethencourt A, Pernasetti LV, Pérez MPP, Pérez MPP, Crespo FR, Cebada FS, Elízaga J, Peláez JAF, Domínguez JFO, García JR, Marrupé LH, Vizcayno MJP, Moreno R, González RS, Antón SÁ, Alonso BR, Macaya C, Barrero EA, García E, Hernández FH, Molinero JP, Unzué L, Álvarez MEV, Bermúdez EP, Ruiz FJL, Quevedo VR, Urdaci MA, Bosco AMT, Elorriaga AS, Román KGS, Moreno RS, Andraha L, Tellechea ML, Miguel JAD, Arroyo JRR.

Spanish Cardiac Catheterization and Coronary Intervention Registry. 30th Official Report of the Interventional Cardiology Association of the Spanish Society of Cardiology (1990-2020) in the year of the COVID-19 pandemic.

Rev Esp Cardiol (Engl Ed). 2021 Dec;74(12):1095-1105. doi: 10.1016/j.rec.2021.10.008. Epub 2021 Oct 28.

INTRODUCTION AND OBJECTIVES: The Interventional Cardiology Association of the Spanish Society of Cardiology (ACI-SEC) presents its annual activity report for 2020, the year of the coronavirus disease (COVID-19) pandemic. **METHODS:** All Spanish centers with catheterization laboratories were invited to participate. Data were collected online and were analyzed by an external company, together with the members of the ACI-SEC.

RESULTS: A total of 123 centers participated (4 more than 2019), of which 83 were public and 40 were private. Diagnostic coronary angiograms decreased by 9.4%, percutaneous coronary interventions by 10.1%, primary percutaneous coronary interventions by 4.1%, transcatheter aortic valve replacements by 0.9%, and left atrial appendage closure by 8.3%. The only procedures that increased with respect to previous years were edge-to-edge mitral valve repair (13.8%) and patent foramen ovale closure (19.4%). The use of pressure wire (5.5%), intravascular imaging devices and plaque preparation devices decreased (with the exception of lithotripsy, which increased by 62%). **CONCLUSIONS:** In the year of the COVID-19 pandemic, the registry showed a marked drop in activity in all procedures except for percutaneous mitral valve repair and patent foramen ovale closure. This decrease was less marked than previously described, suggesting a rebound in interventional activity after the first wave.

INTRODUCCIÓN Y OBJETIVOS: La Asociación de Cardiología Intervencionista de la Sociedad Española de Cardiología (ACI-SEC) presenta su informe anual de actividad de 2020, año de la pandemia de la COVID-19. **MÉTODOS:** Se invitó a participar a todos los centros españoles con sala de hemodinámica. La recogida de datos se realizó por vía telemática y una empresa externa, junto con los miembros de la ACI-SEC, llevó a cabo su análisis. **RESULTADOS:** Participaron 123 centros (4 más que el año previo), 83 públicos y 40 privados. Se observó una reducción del 9,4% de coronariografías, el 10,1% de intervenciones coronarias percutáneas, el 4,1% de angioplastias primarias, el 0,9% de válvulas aórticas transcáteter y el 8,3% de cierre de orejuelas. Los únicos procedimientos que se incrementaron con respecto a años previos fueron la reparación mitral con clips (13,8%) y el cierre del foramen oval permeable (19,4%). En cuanto a los dispositivos, disminuyeron las guías de presión (5,5%), la imagen intravascular y los dispositivos de preparación de placa (a excepción de la litotricia, que aumentó un 62%). **CONCLUSIONES:** El registro en el año de la pandemia de la COVID-19 demuestra una marcada caída en la actividad de todos los procedimientos a excepción de la reparación percutánea de la válvula mitral con clips y el cierre del foramen oval permeable. Dicha caída es menor que lo descrito previamente, lo cual indica un rebote de la actividad intervencionista tras la primera ola.

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Indexado en: PubMed

Sutton R, Fedorowski A, Olshansky B, Gert van Dijk J, Abe H, Brignole M, de Lange F, Kenny RA, Lim PB, **Moya A**, Rosen SD, Russo V, Stewart JM, Thijs RD, Benditt DG.

Tilt testing remains a valuable asset.

Eur Heart J. 2021 May 1;42(17):1654-1660. doi: 10.1093/eurheartj/ehab084.

Head-up tilt test (TT) has been used for >50 years to study heart rate/blood pressure adaptation to positional changes, to model responses to haemorrhage, to assess orthostatic hypotension, and to evaluate haemodynamic and neuroendocrine responses in congestive heart failure, autonomic dysfunction, and hypertension. During these studies, some subjects experienced syncope due to vasovagal reflex. As a result, tilt testing was incorporated into clinical assessment of syncope when the origin was unknown. Subsequently, clinical experience supports the diagnostic value of TT. This is highlighted in evidence-based professional practice guidelines, which provide advice for TT methodology and interpretation, while concurrently identifying its limitations. Thus, TT remains a valuable clinical asset, one that has added importantly to the appreciation of pathophysiology of syncope/collapse and, thereby, has improved care of syncopal patients.

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Indexado en: PubMed/WOS/JCR/JCI/ Science Citation Index Expanded (SCIE)

Factor Impacto: 29.983

Quartil: 1

Categoría: Cardiac & Cardiovascular Systems

Posición: 2/141

Sutton R, Fedorowski A, Brignole M, Moya A.

Artur Pietrucha (1964-2020).

Kardiol Pol. 2021;79(6):720-721. doi: 10.33963/KP.a2021.0039.

Indexado en: PubMed/WOS/JCR / JCI/ Science Citation Index Expanded (SCIE)

Factor Impacto: 3.108

Quartil: 2

Categoría: Cardiac & Cardiovascular Systems

Posición: 70/141

DIAGNOSTICO POR LA IMAGEN

Nº Artículos indexados: 1

Factor de Impacto total: 6.202

Factor impacto medio x artículo: 6.202

Rojas G, Perelli S, Ibanez M, Formagnana M, Ormazabal I, Monllau JC.

Effect of Modified Lemaire Anterolateral Extra-articular Tenodesis on the Magnetic Resonance Imaging Maturity Signal of Anterior Cruciate Ligament Hamstring Graft.

Am J Sports Med. 2021 Jun 16:3635465211018858. doi: 10.1177/03635465211018858. Online ahead of print.

BACKGROUND: Lateral extra-articular tenodesis (LET) is one of the most widely used procedures to restore anterolateral stability. Clinical outcomes after the addition of LET to anterior cruciate ligament (ACL) reconstruction (ACLR) have been widely investigated; however, the potential influence of LET on the ACL ligamentization process has not been examined. **PURPOSE/HYPOTHESIS:** The purpose was to use 10-month postoperative magnetic resonance imaging (MRI) scans to determine whether the maturity of grafts after hamstring autograft ACLR was affected by concomitant LET. The hypothesis was that when modified Lemaire lateral extra-articular tenodesis (MLLET) was performed, the MRI parameters of ACL graft maturity would be modified. **STUDY DESIGN:** Cohort study; Level of evidence, 3. **METHODS:** The study included patients treated between December 2017 and December 2018 who had undergone anatomic 3-strand hamstring tendon autograft ACLR, with or without concomitant MLLET, and had undergone MRI 10 months postoperatively. Thus, the study included 30 patients who had isolated ACLR and 22 patients who had ACLR plus MLLET. The 2 groups were comparable based on all criteria analyzed. To evaluate graft maturity, the signal-to-noise quotient (SNQ) was measured in 3 regions of interest of the proximal, midsubstance, and distal ACL graft. Lower SNQ ratios indicate less water content and, theoretically, better maturity and healing of the graft. **RESULTS:** The mean \pm SD for SNQ was 4.62 ± 4.29 (range, 3.12-6.19) in the isolated ACLR group and 7.59 ± 4.68 (range, 4.38-8.04) in the ACLR plus MLLET group ($P = .012$). Upon comparing the mean values of the 3 portions between the 2 groups, we found a significant difference between the 2 groups for the proximal and middle portions ($P = .007$ and $P = .049$, respectively) but no difference in the distal portion ($P = .369$). **CONCLUSION:** At the 10-month follow-up, hamstring tendon autografts for anatomic ACLR with MLLET did not show the same MRI signal intensity compared with isolated hamstring anatomic ACLR.

Indexado en: PubMed/WOS/JCR/JCI/ Science Citation Index Expanded (SCIE)

Factor Impacto: 6.202

Quartil: 1

Categoría: Orthopedics; Sport Sciences

Posición: Orthopedics 3/82; Sport Sciences 7/88

DIGESTIVO

Nº Artículos indexados: 4

Factor de Impacto total: 23.117

Factor impacto medio x artículo: 18.768

Agurto HS, Alcantara-Diaz AL, Espinet-Coll E, Toro-Huamanchumo CJ.

Eating habits, lifestyle behaviors and stress during the COVID-19 pandemic quarantine among Peruvian adults.

PeerJ. 2021 May 11;9:e11431. doi: 10.7717/peerj.11431. eCollection 2021.

BACKGROUND AND AIMS: The coronavirus disease 2019 (COVID-19) outbreak has led to an unprecedented public health crisis. In Peru, although the quarantine is no longer mandatory, it was during the first months of 2020. To date, no studies have assessed the impact of the COVID-19 on the eating patterns and lifestyle context in the country. We aimed to describe the eating habits, lifestyle behaviors and stress during the COVID-19 pandemic quarantine among Peruvian adults. **METHODS:** We conducted a cross-sectional study. We used an online survey to collect information regarding eating habits, self-perceived stress and sedentary lifestyle among adults over 18 years of age residing in Lima-Peru and who complied with strict home quarantine. We presented our data according to the weight variation of the participants. **RESULTS:** A total of 686 were finally included in the study. The 82.9% were female, the median BMI was 25.97 kg/m² (IQR: 23.37-29.41) and 68.2% reported a significant variation in their weight (38.9% increased and 29.3% lost weight). All bad habits were significantly associated with weight gain, except for prolonged fasting. Additionally, a sitting time longer than usual ($p = 0.001$), being in front of a screen for more than five hours in the last week ($p = 0.002$), and most of the stressful scenarios were significantly associated with weight gain. **CONCLUSION:** Almost four out of ten participants gained weight during the quarantine. This was associated with unhealthy eating habits, physical inactivity, and stressful scenarios.

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Indexado en: PubMed/WOS/JCR /JCI/ Science Citation Index Expanded (SCIE)

Factor Impacto: 2.984

Quartil: 2

Categoría: Multidisciplinary Sciences

Posición: 27/73

Chaparro M, Garre A, Núñez Ortiz A, Diz-Lois Palomares MT, Rodríguez C, Riestra S, Vela M, Benítez JM, Fernández Salgado E, Sánchez Rodríguez E, Hernández V, Ferreiro-Iglesias R, Ponferrada Díaz Á, Barrio J, Huguet JM, Sicilia B, Martín-Arranz MD, Calvet X, Ginard D, Alonso-Abreu I, Fernández-Salazar L, Varela Trastoy P, Rivero M, Vera-Mendoza I, Vega P, Navarro P, Sierra M, Cabriada JL, Aguas M, Vicente R, Navarro-Llavat M, Echarri A, Gomollón F, Guerra Del Río E, Piñero C, Casanova MJ, Spicakova K, Ortiz de Zarate J, Torrella Cortés E, Gutiérrez A, Alonso-Galán H, Hernández-Martínez Á, Marrero JM, Lorente Poyatos R, Calafat M, Martí Romero L, Robledo P, Bosch O, Jiménez N, Esteve Comas M, Duque JM, Fuentes Coronel AM, Josefa Sampedro M, Sesé Abizanda E, Herreros Martínez B, Pozzati L, Fernández Rosáenz H, Crespo Suarez B, López Serrano P, Lucendo AJ, Muñoz Vicente M, Bermejo F, Ramírez Palanca JJ, Menacho M, Carmona A, Camargo R, Torra Alsina S, Maroto N, Nerín de la Puerta J, Castro E, Marín-Jiménez I, Botella B, Sapiña A, Cruz N, Forcelledo JLF, Bouhmidi A, Castaño-Milla C, Opio V, Nicolás I, Kutz M, Abrales Bechiarelli A, Gordillo J, Ber Y, Torres Domínguez Y, Novella Durán MT, Rodríguez Mondéjar S, Martínez-Cerezo FJ, Kolle L, Sabat M, Ledezma C, Iyo E, Roncero Ó, Irisarri R, Lluís L, Blázquez Gómez I, Zapata EM, José Alcalá M, Martínez Pascual C, Montealegre M, Mata L, Monrobel A, Hernández Camba A, Hernández L, Tejada M, Mir A, Galve ML, Soler M, Hervías D, Gómez-Valero JA, Barreiro-de Acosta M, Rodríguez-Artalejo F, García-Esquinas E, Gisbert JP, On Behalf Of The EpidemIBD Study Group Of Geteccu.

Incidence, Clinical Characteristics and Management of Inflammatory Bowel Disease in Spain: Large-Scale Epidemiological Study.

J Clin Med. 2021 Jun 29;10(13):2885. doi: 10.3390/jcm10132885.

Aims: To assess the incidence of inflammatory bowel disease (IBD) in Spain, to describe the main epidemiological and clinical characteristics at diagnosis and the evolution of the disease, and to explore the use of drug treatments. **(2) Methods:** Prospective, population-based nationwide registry. Adult patients diagnosed with IBD-Crohn's disease (CD), ulcerative colitis (UC) or IBD unclassified (IBD-U)-during 2017 in Spain were included and were followed-up for 1 year. **(3) Results:** We identified 3611 incident cases of IBD diagnosed during 2017 in 108 hospitals covering over 22 million inhabitants. The overall incidence (cases/100,000 person-years) was 16 for IBD, 7.5 for CD, 8 for UC, and 0.5 for IBD-U; 53% of patients were male and median age was 43 years (interquartile range = 31-56 years). During a median 12-month follow-up, 34% of patients were treated with systemic steroids, 25% with immunomodulators, 15% with biologics and 5.6% underwent surgery. The percentage of patients under these treatments was significantly higher in CD than UC and IBD-U. Use of systemic steroids and biologics was significantly higher in hospitals with high resources. In total, 28% of patients were hospitalized (35% CD and 22% UC patients, $p < 0.01$). **(4) Conclusion:** The incidence of IBD in Spain is rather high and similar to that reported in Northern Europe. IBD patients require substantial therapeutic resources, which are greater in CD and in hospitals with high resources, and much higher than previously reported. One third of patients are hospitalized in the first year after diagnosis and a relevant proportion undergo surgery.

Indexado en: PubMed/WOS/JCR /JCI/ Science Citation Index Expanded (SCIE)

Factor Impacto: 4.241

Quartil: 1

Categoría: Medicine, General & Internal

Posición: 39/169

Lopez-Nava G, Asokkumar R, Bautista-Castaño I, Laster J, Negi A, Fook-Chong S, **Nebreda Duran J, Espinett Coll E**, Gebelli JP, Garcia Ruiz de Gordejuela A.

Endoscopic sleeve gastropasty, laparoscopic sleeve gastrectomy, and laparoscopic greater curve plication: do they differ at 2 years?

Endoscopy. 2021 Mar;53(3):235-243. doi: 10.1055/a-1224-7231. Epub 2020 Jul 22.

Comment in

Endoscopy. 2021 Mar;53(3):244-245.

Endoscopy. 2021 Mar;53(3):v12.

Endoscopy. 2021 Mar;53(3):339.

Endoscopy. 2021 Mar;53(3):340.

Endoscopic sleeve gastropasty (ESG) is an effective treatment option for obesity. However, data comparing its efficacy to bariatric surgery are scarce. We aimed to compare the effectiveness and safety of ESG with laparoscopic sleeve gastrectomy (LSG) and laparoscopic greater curve plication (LGCP) at 2 years. **METHODS :** We reviewed 353 patient records and identified 296 patients who underwent ESG ($n=199$), LSG ($n=61$), and LGCP ($n=36$) at four centers in Spain between 2014 and 2016. We compared their total body weight loss (%TBWL) and safety over 2 years. A linear mixed model (LMM) was used to analyze repeated measures of weight loss outcomes at 6, 12, 18, and 24 months to compare the three procedures. **RESULTS :** Among the 296 patients, 210 (ESG 135, LSG 43, LGCP 32) completed 1 year of follow-up and 102 (ESG 46, LSG 34, LGCP 22) reached 2 years. Their mean (standard deviation [SD]) body mass index (BMI) was 39.6 (4.8) kg/m². There were no differences in age, sex, or BMI between the groups. In LMM analysis, adjusting for age, sex, and initial BMI, we found ESG had a significantly lower TBWL, %TBWL, and BMI decline compared with LSG and LGCP at all time points ($P=0.001$). The adjusted mean %TBWL at 2 years for ESG, LSG, and LGCP were 18.5%, 28.3%, and 26.9%, respectively. However, ESG, when compared with LSG and LGCP, had a shorter inpatient stay (1 vs. 3 vs. 3 days; $P<0.001$) and lower complication rate (0.5% vs. 4.9% vs. 8.3%; $P=0.006$). **CONCLUSION :** All three procedures induced significant weight loss in obese patients. Although the weight loss was lower with ESG compared with other techniques, it displayed a better safety profile and shorter hospital stay.

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Indexado en: PubMed/WOS/JCR /JCI/ Science Citation Index Expanded (SCIE)

Factor Impacto: 10.093

Quartil: 1

Categoría: Gastroenterology & Hepatology; Surgery

Posición: Gastroenterology & Hepatology 11/92; Surgery 5/212

Musto JA, Eickhoff J, Ventura-Cots M, Abrales JG, Bosques-Padilla F, Verna EC, Brown RS Jr, Vargas V, Altamirano J, Caballería J, Shawcross D, Louvet A, Mathurin P, Garcia-Tsao G, Schnabl B, Bataller R, Lucey MR.

The level of alcohol consumption in the prior year does not impact clinical outcomes in patients with alcohol-associated hepatitis (AH).

Liver Transpl. 2021 Jun 10. doi: 10.1002/lt.26203. Online ahead of print.

BACKGROUND AND AIMS: AUDIT-10 and its shorter form, AUDIT-C, are questionnaires used to characterize severity of drinking. We hypothesized that liver injury and short-term outcomes of alcohol-associated hepatitis (AH) would correlate with a patient's recent alcohol consumption as determined by AUDIT-10 and -C. **METHODS:** We analyzed a prospective international database of patients with AH diagnosed based on the NIAAA standard definitions. All subjects were interviewed using AUDIT-10. Primary outcomes included the discriminatory ability of the AUDIT-10 and AUDIT-C scores for predicting survival status at 28 and 90 days and severity of liver injury, as measured by MELD-Na. The relationship between AUDIT scores and survival status was quantified by calculating the area under the curve (AUC) of the receiver operating characteristics (ROC) analysis. The relationship between AUDIT scores and MELD-Na was examined using correlation coefficients. **RESULTS:** In 245 subjects (age range: 25-75 years) (35% female), we found no correlation between AUDIT-10 or AUDIT-C scores and either 28-day or 90-day mortality. Similarly, there was no correlation between AUDIT-10 and AUDIT-C and MELD-Na scores. There was a strong positive correlation between MELD-Na and 28-day and 90-day mortality. Additional measures of severity of alcohol use (average grams of alcohol consumed per day, years of drinking, convictions for driving under the influence and rehab attempts) and psychosocial factors (marriage, paid employment and level of social support) had no influence on MELD-Na. **CONCLUSIONS:** In patients presenting with AH, AUDIT-10 and AUDIT-C were not predictors of clinical severity of liver disease nor of short-term mortality, suggesting that level of alcohol consumption in the prior year is not key to the presenting features or outcome of AH.

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Indexado en: PubMed/WOS/JCR /JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 5.799

Quartil: 1

Categoría: Transplantation; Gastroenterology & Hepatology

Posición: Transplantation 4/25; Gastroenterology & Hepatology 26/92

FARMACIA

Nº Artículos indexados: 1

Factor de Impacto total: 6.089

Factor impacto medio x artículo: 6.089

Marin S, Serra-Prat M, Ortega O, Audouard Fericgla M, Valls J, Palomera E, Cunillera R, Palomeras E, Ibàñez JM, Clavé P.

Healthcare costs of post-stroke oropharyngeal dysphagia and its complications: malnutrition and respiratory infections.

Eur J Neurol. 2021 Nov;28(11):3670-3681. doi: 10.1111/ene.14998. Epub 2021 Jul 27.

BACKGROUND AND PURPOSE: The healthcare economic costs of post-stroke oropharyngeal dysphagia (OD) are not fully understood. The purpose of this study was to assess the acute, subacute and long-term costs related to post-stroke OD and its main complications (malnutrition and respiratory infections). **METHODS:** A cost of illness study of patients admitted to Mataró Hospital (Catalonia, Spain) from May 2010 to September 2014 with a stroke diagnosis was performed. OD, malnutrition and respiratory infections were assessed during hospitalization and follow-up (3 and 12 months). Hospitalization and long-term costs were measured from hospital and healthcare system perspectives. Multivariate linear regression analysis was performed to assess the independent effect of OD, malnutrition and respiratory infections on healthcare costs during hospitalization, and at 3 and 12 months' follow-up. **RESULTS:** In all, 395 patients were included of whom 178 had OD at admission. Patients with OD incurred major total in-hospital costs (€5357.67 ± €3391.62 vs. €3976.30 ± €1992.58, $p < 0.0001$), 3-month costs (€8242.0 ± €5376.0 vs. €5320.0 ± €4053.0, $p < 0.0001$) and 12-month costs (€11,617.58 ± €12,033.58 vs. €7242.78 ± €7402.55, $p < 0.0001$). OD was independently associated with a cost increase of €789.68 ($p = 0.011$) during hospitalization and of €873.5 ($p = 0.084$) at 3 months but not at 12 months. However, patients with OD who were at risk of malnutrition or malnourished and suffered respiratory infections incurred major mean costs compared with those patients without OD (€19,817.58 ± €13,724.83 vs. €7242.8 ± €7402.6, $p < 0.0004$) at 12 months' follow-up. **CONCLUSION:** Oropharyngeal dysphagia causes significant high economic costs during hospitalization that strongly and significantly increase with the development of malnutrition and respiratory infections at long-term follow-up.

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Indexado en: PubMed/WOS/JCR /JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.089

Quartil: 1

Categoría: Neurosciences; Clinical Neurology

Posición: Neurosciences 53/273; Clinical Neurology 30/208

ENDOCRINOLOGIA Y NUTRICION

Nº Artículos indexados: 4

Factor de Impacto total: 5.738

Factor impacto medio x artículo: 1.434

Pérez-Roncero GR, López-Baena MT, Sánchez-Prieto M, Chedraui P, Pérez-López FR.

Association of breastfeeding duration with carotid intima-media thickness in later life: a systematic review and meta-analysis.

Gynecol Endocrinol. 2021 Sep;37(9):778-784. doi: 10.1080/09513590.2021.1925244. Epub 2021 May 25.

OBJECTIVE: To assess the relationship of breastfeeding duration with maternal ultrasound carotid intima-media thickness (CIMT) in later life. **METHODS:** PubMed, Scopus, Web of Science, Embase, and Cochrane Central database searching up to December 15, 2020, for eligible studies that reported on the breastfeeding duration and ultrasound measurement of CIMT in later life. The exposed group corresponded to breastfeeding duration \geq 6 months whereas the control group was women with breastfeeding of shorter duration or nil breastfeeding. The methodological quality of reviewed articles was appraised using the Newcastle-Ottawa Scale (NOS). Results are reported as the mean difference (MD) or the standardized MD (SMD) and their 95% confidence intervals (CIs). The study was registered in the PROSPERO database. **RESULTS:** Of 532 unique studies, three studies met inclusion criteria including 1721 women with a mean age ranging between 36.6 ± 6.9 and 55.7 ± 5.3 years, comparing breastfeeding duration \geq 6 months versus 1-5 months (NOS: 7-8). Common CIMT was lower in women who breastfed for a longer duration (SMD = -0.10, 95% CI -0.20 to -0.00). Circulating HDL-cholesterol was higher in women with longer breastfeeding duration (MD = 3.25, 95% CI 0.88-5.61). There were no significant differences for total cholesterol, LDL-cholesterol, triglycerides, glucose, and blood pressure between breastfeeding 6 or more months and the control group. **CONCLUSIONS:** The available studies showed lower CIMT and higher HDL-cholesterol levels in women who breastfed for 6 or more months as compared to controls.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 2.260

Quartil: 3

Categoría: Obstetrics & Gynecology; Endocrinology & Metabolism

Posición: Obstetrics & Gynecology 54/83; Endocrinology & Metabolism 127/146 (Q4)

Picó A, Aranda-López I, Sesmilo G, Toldos-González Ó, Japón MA, Luque RM, Puig-Domingo M.

Recommendations on the pathological report of pituitary tumors. A consensus of experts of the Spanish Society of Endocrinology and Nutrition and the Spanish Society of Pathology.

Endocrinol Diabetes Nutr (Engl Ed). 2021 Mar;68(3):196-207. doi: 10.1016/j.endinu.2020.10.004. Epub 2021 Feb 3. [Article in English, Spanish]

Pituitary neuroendocrine tumors (PitNETs) constitute, together with other tumors of the sellar region, 15-25% of intracranial neoplasms. In 2017, the World Health Organization proposed a new classification of PitNETs. The main innovation with respect to the 2004 classification was the recommendation to include in the immunohistochemical evaluation of PitNETs the determination of the transcription factors of the 3 pituitary cell lineages: Pit-1, Tpit and SF-1. Additionally, other clinicopathological classifications with a predictive capacity of tumor behavior during follow-up were proposed. Given these changes, it is appropriate to adapt the knowledge generated during the last 15 years to the daily practice of the treatment and monitoring of PitNETs at the Centers of Excellence in Pituitary Pathology. This document includes the positioning of the Spanish Society of Endocrinology and Nutrition (SEEN) and the Spanish Society of Pathology (SEAP) on the classification and denomination of the PitNETs and the information that the pathologist should provide to the clinician to facilitate the treatment and monitoring of these tumors.

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Indexado en: PubMed

Gil J, Marques-Pamies M, Jordà M, Fajardo-Montañana C, García-Martínez A, Sampedro, Serra G, Salinas I, Blanco A, Valassi E, **Sesmilo G**, Carrato C, Cámara R, Lamas C, Casano-Sancho P, Alvarez CV, Bernabéu I, Webb SM, Picó A, Marazuela M, Puig-Domingo M; on behalf REMAH investigators.

Molecular determinants of enhanced response to somatostatin receptor ligands after debulking in large GH-producing adenomas.

Clin Endocrinol (Oxf). 2021 May;94(5):811-819. doi: 10.1111/cen.14339. Epub 2021 Mar 14.

Collaborators: Adrados M, Martínez Flores P, Leví AMR, Serrano-Somavilla A, Paz de Miguel Novoa M, García Villanueva M, Iglesias P, Rodríguez Berrocal V, Blanco C, Alameda Hernando C, Luis JMP, García Centeno R, Iza B, Alvarez-Escolá C, Pérez Zamarrón Á, Pérez López C, Alén JF, Calatayud Gutiérrez M, Paredes Sansinenea I, Otero Á, María Recio J, Sousa P, Aguilló Gutiérrez E, Bances L, Calvo Gracia FL, Comuñas F, Crespo I, Ma Martel L, Fernando Muñoz P, Resmini E, Roig O, Santos A, Tresserras P, Asencio C, Gras JR, Maria Montserrat J, Obiols G, Biagetti B, Torres A, Vidal N, Guanyabens E, Cajas P, Cuatrecasas G, Enseñat J, Mora M, Hansu F, Halperin I, Buj R, Villalmanzo N, Cecenarro L, Hostalot C, Riesgo P, Simal-Julian JA, Sandoval H, Lamas C, Abarca J, Arias Mendoza N, Sánchez Ortega R, Monjas I, Aranda I, Pedro Font T, Alonso Troncoso I, Fernández Catalina P, Álvarez San Martín RM, Villar R, Ballesteros MD, Pérez Romero S, Fernández Rodríguez E, García-Allut A, Serramito R, Prieto A, Cotovad Bellas L, Vidal Pardo JJ.

OBJECTIVE: Large somatotrophic adenomas depict poor response to somatostatin receptor ligands (SRLs). Debulking has shown to enhance SRLs effect in some but not all cases and tumour volume reduction has been proposed as the main predictor of response. No biological studies have been performed so far in this matter. We aimed to identify molecular markers of response to SRLs after surgical debulking in GH-secreting adenomas.

DESIGN: We performed a multicenter retrospective study. **PATIENTS:** 24 patients bearing large GH-producing tumours. **MEASUREMENTS:** Clinical data and SRLs response both before and after surgical debulking were collected, and 21 molecular biomarkers of SRLs response were studied in tumour samples by gene expression.

RESULTS: From the 21 molecular markers studied, only two of them predicted enhanced SRLs response after surgery. Tumours with improved response to SRLs after surgical debulking showed lower levels of Ki-67 (MKI67, FC = 0.17 and P = .008) and higher levels of RAR-related orphan receptor C (RORC) (FC = 3.1 and P < .001). When a cut-off of no detectable expression was used for Ki-67, the model provided a sensitivity of 100% and a specificity of 52.6% with an area under the curve of 65.8%. Using a cut-off of 2 units of relative expression of RORC, the prediction model showed 100% of sensitivity and specificity. **CONCLUSIONS:** High levels of RORC and low levels of Ki-67 identify improved SRLs response after surgical debulking in large somatotrophic adenomas. To determine their expression would facilitate medical treatment decision-making after surgery.

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Indexado en: PubMed/WOS/JCR /JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 3.478

Quartil: 3

Categoría: Endocrinology & Metabolism

Posición: 89/145

Picó A, Aranda-López I, **Sesmilo G**, Toldos-González Ó, Japón MA, Luque RM, Puig-Domingo M.

Recomendaciones sobre el diagnóstico e informe anatomopatológico de los tumores neuroendocrinos hipofisarios. Consenso de expertos de la Sociedad Española de Endocrinología y Nutrición y de la Sociedad Española de Anatomía Patológica

Rev Esp Patol. 2021 Oct-Dec;54(4):263-274. doi: 10.1016/j.patol.2020.11.006. Epub 2021 Mar 1.

Pituitary neuroendocrine tumors (PitNETs) constitute, together with other tumors of the sellar region, 15-25% of intracranial neoplasms. In 2017, the World Health Organization proposed a new classification of PitNETs. The main innovation with respect to the 2004 classification was the recommendation to include in the immunohistochemical evaluation of PitNETs the determination of the transcription factors of the 3 pituitary cell lineages: Pit-1, Tpit and SF-1. Additionally, other clinicopathological classifications with a predictive capacity of

tumor behavior during follow-up were proposed. Given these changes, it is appropriate to adapt the knowledge generated during the last 15 years to the daily practice of the treatment and monitoring of PitNETs at the Centers of Excellence in Pituitary Pathology. This document includes the positioning of the Spanish Society of Endocrinology and Nutrition (SEEN) and the Spanish Society of Pathology (SEAP) on the classification and denomination of the PitNETs and the information that the pathologist should provide to the clinician to facilitate the treatment and monitoring of these tumors.

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Indexado en: PubMed

ICATME – INSTITUT CATALÀ DE TRAUMATOLOGIA I MEDICINA DE L'ESPORT

Nº Artículos indexados: 34

Factor de Impacto total: 46.532

Factor impacto medio x artículo: 1.368

Alabau-Rodriguez S, Mir-Bullo X, Barrera-Ochoa S.

Extended indications for retrograde intramedullary cannulated headless screws for proximal phalanx fractures.

J Hand Surg Eur Vol. 2021 Apr 22:17531934211009684. doi: 10.1177/17531934211009684. Online ahead of print.

Indexado en: PubMed/WOS/JCR /JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 2.688

Quartil: 2

Categoria: Orthopedics; Surgery

Posición: Orthopedics 36/82; Surgery 93/212

Alabau-Rodriguez S, Romero-Larrauri P, Soldado F.

Glenohumeral abduction contractures after residual neonatal brachial plexus injury.

J Hand Surg Eur Vol. 2021 Sep 15:17531934211045509. doi: 10.1177/17531934211045509. Online ahead of print.

Glenohumeral abduction contractures are common in patients with neonatal brachial plexus injury, but little has been previously published about them. We conducted a retrospective analysis of data prospectively collected from 205 consecutive children (108 female) of mean age 9.6 years with neonatal brachial plexus injury (C5-C6, 58%; C5-C7, 29%; C5-T1, 14%). Most children (69%) showed a glenohumeral abduction contracture, it being more common in those with upper neonatal brachial plexus injury. Level of evidence: III.

Indexado en: PubMed/WOS/JCR /JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 2.688

Quartil: 2

Categoria: Orthopedics; Surgery

Posición: Orthopedics 36/82; Surgery 93/212

Arredondo R, **Poggioli F**, Martínez-Díaz S, Piera-Trilla M, **Torres-Claramunt R**, Tío L, **Monllau JC.**

Fibronectin-coating enhances attachment and proliferation of mesenchymal stem cells on a polyurethane meniscal scaffold.

Regen Ther. 2021 Nov 26;18:480-486. doi: 10.1016/j.reth.2021.11.001. eCollection 2021 Dec.

INTRODUCTION: Partial meniscectomy is one of the most common surgical strategy for a meniscal injury, but sometimes, patients complain of knee pain due to an overload in the ablated compartment. In these cases, implantation of tissue engineering scaffold could be indicated. Currently, two commercial scaffolds, based on collagen or polycaprolactone-polyurethane (PCL-PU), are available for meniscus scaffolding. In short term follow-up assessments, both showed clinical improvement and tissue formation. However, long-term studies carried out in PCL-PU showed that the new tissue decreased in volume and assumed an irregular shape. Moreover, in some cases, the scaffold was totally reabsorbed, without new tissue formation. Mesenchymal stem cells (MSCs) combined with scaffolds could represent a promising approach for treating meniscal defects because of their multipotency and self-renewal. In this work, we aimed to compare the behaviour of MSCs and chondrocytes on a PCL-PU scaffold in vitro. MSCs express integrins that binds to fibronectin (FN), so we also investigate the effect of a FN coating on the bioactivity of the scaffold. **METHODS:** We isolated rabbit bone marrow MSCs (rBM-MSCs) from two skeletally mature New Zealand white rabbits and established the optimum culture condition to expand them. Then, they were seeded over non-coated and FN-coated scaffolds and cultured in chondrogenic conditions. To evaluate cell functionality, we performed an MTS assay to compare cell

proliferation between both conditions. Finally, a histologic study was performed to assess extracellular matrix (ECM) production in both samples, and to compare them with the ones obtained with rabbit chondrocytes (rCHs) seeded in a non-coated scaffold. **RESULTS:** A culture protocol based on low FBS concentration was set as the best for rBM-MSCs expansion. The MTS assay revealed that rBM-MSCs seeded on FN-coated scaffolds have more cells on proliferation (145%; 95% CI: 107%-182%) compared with rBM-MSCs seeded on non-coated scaffolds. Finally, the histologic study demonstrated that rCHs seeded on non-coated scaffolds displayed the highest production of ECM, followed by rBM-MSCs seeded on FN-coated scaffolds. Furthermore, both cell types produced a comparable ECM pattern. **CONCLUSION:** These results suggest that MSCs have low capacity attachment to PCL-PU scaffolds, but the presence of integrin alpha5beta1 (FN-receptor) in MSCs allows them to interact with the FN-coated scaffolds. These results could be applied in the design of scaffolds, and might have important clinical implications in orthopaedic surgery of meniscal injuries.

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Indexado en: PubMed/WOS/JCR /JCI/Science Citation Index Expanded (SCIE)

Factor Impacto:3.419

Quartil: 2

Categoria: Engineering, Biomedical; Cell & Tissue Engineering (Q4)

Posición: Engineering, Biomedical 42/89; Cell & Tissue Engineering 22/29

Barastegui D, Gallardo-Calero I, Rodriguez-Carunchio L, **Barrera-Ochoa S**, Knorr J, Rivas-Nicolls D, Soldado F. **Effect of vascularized periosteum on revitalization of massive bone isografts: An experimental study in a rabbit model.**

Microsurgery. 2021 Feb;41(2):157-164. doi: 10.1002/micr.30647. Epub 2020 Sep 19.

INTRODUCTION: In the last years, limb salvage has become the gold standard treatment over amputation. Today, 90% of extremity osteogenic sarcomas can be treated with limb salvage surgery. However, these reconstructions are not exempt from complications. Massive allografts have been associated to high risk of nonunion (12-57%), fracture (7-30%) and infection (5-21%). Association of vascularized periosteum flap to a massive bone allograft (MBA) has shown to halve the average time of allograft union in clinical series, even compared to vascularized fibular flap. Creeping substitution process has been reported in massive allograft when periosteum flap was associated. However, we have little data about whether it results into allograft revitalization. We hypothesize that the association of a periosteum flap to a bone isograft promotes isograft revitalization, defined as the colonization of the devitalized bone by new-form vessels and viable osteocytes, turning it vital. **MATERIALS AND METHODS:** Forty-four New Zealand white male rabbits underwent a 10 mm segmental radial bone defect. In 24 rabbits the bone excision included the periosteum (controls); in 20 rabbits (periosteum group) bone excision was performed carefully detaching periosteum in order to preserve it. Cryopreserved bone isograft from another rabbit was trimmed and placed to the defect gap and was fixed with a retrograde intramedullar 0.6 mm Kirschner wire. Rabbits were randomized and distributed in 3 subgroups depending on the follow-up (control group: 5 rabbits in 5-week follow up group, 8 rabbits in 10-week follow-up group, 7 rabbits in 20-week follow-up group; periosteum group: 5 rabbits in 5-week follow up group, 7 rabbits in 10-week follow-up group, 7 rabbits in 20-week follow-up group). Fluoroscopic images of rabbit forelimb were taken after sacrifice to address union. Each specimen was blindly evaluated in optical microscope (magnification, $\times 4$) after hematoxylin and eosin staining to qualitative record: presence of new vessels and osteocytes in bone graft lacunae (yes/no) to address revitalization, presence of callus (yes/no) and woven bone and cartilage tissue area (mm²) to address remodeling (osteoclast resorption of old bone and substitution by osteoblastic new bone formation). **RESULTS:** No isograft revitalization occurred in any group, but it was observed bone graft resorption and substitution by new-formed bone in periosteum group. This phenomenon was accelerated in 5-week periosteum group (control group: 49.5 ± 9.6 mm² vs. periosteum group: 34.9 ± 10.4 mm²; $p = .07$). Remodeled lamellar bone was observed in both 20-week groups (control group: 6.1 ± 6.3 mm² vs. periosteum group: 5.8 ± 3.0 mm², $p = .67$). Periosteum group showed complete integration and graft substitution, whereas devitalized osteons were still observed in 20-week controls. All periosteum group

samples showed radiographic union through a bone callus, whereas controls showed nonunion in eight specimens (Union rate: control group 60% vs. periosteum group 100%, $p = .003$). **CONCLUSIONS:** Association of vascularized periosteum to a massive bone isograft has shown to accelerate bone graft substitution into a newly formed bone, thus, no bone graft revitalization occurs.

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Indexado en: PubMed/WOS/JCR /JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 2.425

Quartil: 2

Categoría: Surgery

Posición: 106/212

Barrera-Ochoa S, Sapage R, Alabau-Rodriguez S, Mendez-Sanchez G, Mir-Bullo X, Soldado F.

Vascularized Ulnar Periosteal Pedicled Flap for Upper Extremity Reconstruction in Adults: A Prospective Case Series of 11 Patients.

J Hand Surg Am. 2021 May 17;S0363-5023(21)00167-2. doi: 10.1016/j.jhsa.2021.02.027. Online ahead of print.

PURPOSE: We hypothesized that a vascularized ulnar periosteal pedicled flap (VUPPF) is a versatile graft applicable in adult patients that yields good outcomes and is a reliable alternative to other vascularized bone grafts to reduce both the technical demands and donor site morbidity of other options. **METHODS:** We reviewed 11 adult patients who underwent surgical treatment of forearm atrophic nonunion with a VUPPF. Patients' demographics, outcomes (measured by pain on the visual analog scale; Quick Disabilities of the Arm, Shoulder, and Hand score; range of motion; and grip strength), and associated complications were reported. **RESULTS:** Of the 11 patients, 5 had previous surgery in an attempt to treat the nonunion with an autologous cancellous bone graft from the iliac crest or olecranon. The average time from nonunion until the VUPPF was 9 months (SD, ± 3 months; range, 6-14 months). The mean visual analog scale score improved considerably after surgery (8.7 vs 0.6), and considerable improvement was also noted in the Quick Disabilities of the Arm, Shoulder, and Hand score (50 vs 6). A notable improvement was seen in grip strength after surgery. Pronation/supination also improved considerably between the preoperative assessment and the final postoperative follow-up. **CONCLUSIONS:** A vascularized ulnar periosteal pedicled flap seems to be a useful and versatile option for a variety of bone union failures of the upper extremity in adults, either at initial presentation or as a salvage technique. **TYPE OF STUDY/LEVEL OF EVIDENCE:** Therapeutic IV.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 2.230

Quartil: 3

Categoría: Orthopedics; Surgery

Posición: Orthopedics 47/82; Surgery 117/212

Campillo-Recio D, Comas-Aguilar M, Barrera-Ochoa S, Caceres-Palou E, Charte A, Mir-Bullo X.

Accidents and injuries in elite MotoGP motorcycle riders.

J Clin Orthop Trauma. 2021 Apr 14;18:25-29. doi: 10.1016/j.jcot.2021.04.006. eCollection 2021 Jul.

OBJECTIVE: Evaluating incidence, characteristics and risk factors of accidents and injuries in each elite motorcycle racing class (MotoGP, Moto2 and Moto3), 2013-2017. **DESIGN:** Descriptive epidemiological study. **SETTING:** MotoGP Medical Team, Dorna Sports SL. **PARTICIPANTS:** Competing riders in elite motorcycling racing classes, 2013-2017. **INTERVENTIONS:** Benchmarking incidence, characteristics and risk factors of accidents and injuries in each elite motorcycle racing class, 2013-2017. **MAIN OUTCOME MEASURES:** Association between accident type (by class and year) and fracture, withdrawal from race, need for surgery, injuries (fractures or contusions/wounds) and time riders kept inactive. Circuit and curve, weather conditions, presence and type of fracture, clinical outcome, and time until return to competition. Event outcomes were defined as rider fit/rider unfit after each accident. Racing class, track curves and circuits with the most and fewest accidents, circuit characteristics, speed and deceleration, G-forces, and time race differences between

classes.**RESULTS:** 9092 accidents (mean 1818,4 per year). Most during race and under wet-weather conditions. Class and circuit with most accidents 2013-2017 were Moto3 (3374; 37.11%) and MWC - Marco Simoncelli -with 430.119/9092 accidents resulted in a fracture (1.31%), 83, surgical fractures (70%). Most frequent surgical fractures were upper extremity (clavicular; 29/119; 21%). On average, riders returned to competition after two circuits (1-5 weeks).**CONCLUSIONS:** Accidents are not uncommon among elite motorcycle riders; incidences of fractures and surgical fractures are low. Factors such as weather conditions and circuit's characteristics influence the risk of accidents. Further research is necessary to clarify the magnitude of the role each of these factors play.

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Indexado en: PubMed

Campillo-Recio D, Ibañez M, Martín-Dominguez LA, Comas-Aguilar M, Fernández-Morales M, Alberti-Fito G. Local Percutaneous Radiofrequency for Chronic Plantar Fasciitis. Arthrosc Tech. 2021 Apr 18;10(5):e1315-e1320. doi: 10.1016/j.eats.2021.01.031. eCollection 2021 May.

Plantar fasciitis is the most common cause of heel pain. It accounts for 80% of the cases and has an estimated prevalence rate of up to 7% in the general population, with bilateral involvement in 20% to 30% of those patients. This condition affects people of working age, thereby limiting and diminishing their quality of life. There are a wide range of treatment options for the management of plantar fasciitis that include both conservative and surgical treatments. Although surgical treatment based on partial or total plantar fascia release has success rates of some 70% to 90%, it is not free of complications. These complications, soft-tissue healing problems, superficial infection, or longitudinal arch collapse in cases of a greater than 40% release of the fascia. Bipolar radiofrequency appears to be a safe procedure for refractory plantar fasciitis that can provide outcomes equivalent to open plantar fascia release with less morbidity. The purpose of this article is to describe the local percutaneous radiofrequency technique for patients with chronic, recalcitrant plantar fasciitis.

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Indexado en: PubMed/WOS/JCR/JCI/Emerging sources Citation Index (ESCI)

Jornal Citation Index: 0.42

Quartil: 3

Categoría: Orthopedics

Posición: 85/119

Campillo-Recio D, Ibañez M, Hormigo-García H, Jimeno-Torres E, Vilá-Rico J, Alberti-Fito G. Arthroscopic Flexor Halluces Longus Transfer and Percutaneous Achilles Tendon Repair for Distal Traumatic Ruptures. Arthrosc Tech. 2021 Oct 6;10(11):e2435-e2442. doi: 10.1016/j.eats.2021.07.023. eCollection 2021 Nov.

The Achilles tendon is the largest and strongest tendon in the human body. It is the tendon that most often suffers injury and accounts for 20% of all tendon ruptures. These types of ruptures often occur 2 to 6 cm proximal to the stumps in an area of reduced vascularity. One such injury, the distal acute Achilles tendon rupture, is quite uncommon. For distal repairs, there have been studies that used a pullout technique, a button technique, and the use of local tendons for open-fashion augmentation. Although percutaneous repair and endoscopic flexor hallucis longus (FHL) tendon transfer techniques have been described for both acute midportion and chronic Achilles tendon rupture repair, there are no studies that describe the use of percutaneous sutures and biological augmentation with FHL transfer as a treatment option for acute distal injuries. The purpose of this Technical Note is to describe a novel approach to repair. It combines arthroscopic FHL tendon transfer with a percutaneous Achilles tendon repair technique for traumatic distal ruptures.

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Indexado en: PubMed/WOS/JCR /JCI/ Emerging sources Citation Index (ESCI)

Journal Citation Index: 0.42

Quartil: 3

Categoría: Orthopedics

Posición: 85/119

Cavanilles-Walker JM, Rodríguez Montserrat D, Plano Jerez X, Iborra González M, **Ubierna Garcés MT**, Ríos Guillermo J, Cuadras Collsamata P, **Càceres Palou E**, Pérez Andrés R.

Sagittal imbalance influences outcome of vertebroplasty in patients with osteoporotic vertebral compression fracture.

Rev Esp Cir Ortop Traumatol. 2021 Aug 4:S1888-4415(21)00100-4. doi: 10.1016/j.recot.2021.04.002. Online ahead of print. [Article in English, Spanish]

BACKGROUND AND OBJECTIVES: The correlation between sagittal balance of the spine and clinical outcome after vertebroplasty (VP) in patients with osteoporotic vertebral compression fractures (OVCF) is poorly investigated. We analysed the clinical outcome of patients with OVCF undergoing VP taking into account sagittal balance. **MATERIAL AND METHOD:** The primary endpoint was the change in axial back pain, disability and health-related quality-of-life using Visual Analogue Scale (VAS), Oswestry Disability Index (ODI) and SF-36, respectively, in correlation to the parameters that define sagittal balance (SVA). Radiographic assessment included full spine standing lateral films. Imaging and clinical data were collected pre- and post-procedure at 1, 3 and 12 months. **RESULTS:** 51 patients were included presenting a total of 113 OVCF. 30 patients (60.7%) had multiple OVCF. Comparing the evolution of VAS and ODI throughout the follow-up it does not seem that there are significant differences in their behaviour between the SVA>50mm and the SVA<50mm groups ($p>0.05$). On the contrary, pre-VP SF-36 scores showed worst results in the SVA>50mm group in the physical functioning (PF) section ($p<0.05$) and in the physical component score (PCS) ($p<0.05$). These differences were maintained until 3 months of follow-up in the case of the PCS and until the end of follow-up in the case of the PF ($p<0.05$). **CONCLUSIONS:** Patients with a SVA>50mm showed a slower recovery of their quality-of-life after VP for OVCF, but without significant differences with respect to pain or disability, when compared patients with SVA<50mm.

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Chahla J, Kunze KN, LaPrade RF, Getgood A, Cohen M, **Gelber P**, Barenius B, Pujol N, Leyes M, Akoto R, Fritsch B, Margheritini F, Rips L, Kautzner J, Duthon V, Togninalli D, Giacamo Z, Graveleau N, Zaffagnini S, Engbretsen L, Lind M, Maestu R, Von Bormann R, Brown C, Villascusa S, Monllau JC, Ferrer G, Menetrey J, Hantes M, Parker D, Lording T, Samuelsson K, Weiler A, Uchida S, Frosch KH, Robinson J.

The posteromedial corner of the knee: an international expert consensus statement on diagnosis, classification, treatment, and rehabilitation.

Knee Surg Sports Traumatol Arthrosc. 2021 Sep;29(9):2976-2986. doi: 10.1007/s00167-020-06336-3. Epub 2020 Oct 26.

PURPOSE: To establish recommendations for diagnosis, classification, treatment, and rehabilitation of posteromedial corner (PMC) knee injuries using a modified Delphi technique. **METHODS:** A list of statements concerning the diagnosis, classification, treatment and rehabilitation of PMC injuries was created by a working group of four individuals. Using a modified Delphi technique, a group of 35 surgeons with expertise in PMC injuries was surveyed, on three occasions, to establish consensus on the inclusion or exclusion of each statement. Experts were encouraged to propose further suggestions or modifications following each round. Pre-defined criteria were used to refine item lists after each survey. The final document included statements reaching consensus in round three. **RESULTS:** Thirty-five experts had a 100% response rate for all three rounds. A total of 53 items achieved over 75% consensus. The overall rate of consensus was 82.8%. Statements pertaining to PMC reconstruction and those regarding the treatment of combined cruciate and PMC injuries

reached 100% consensus. Consensus was reached for 85.7% of the statements on anatomy of the PMC, 90% for those relating to diagnosis, 70% relating to classification, 64.3% relating to the treatment of isolated PMC injuries, and 83.3% relating to rehabilitation after PMC reconstruction. **CONCLUSION:** A modified Delphi technique was applied to generate an expert consensus statement concerning the diagnosis, classification, treatment, and rehabilitation practices for PMC injuries of the knee with high levels of expert agreement. Though the majority of statements pertaining to anatomy, diagnosis, and rehabilitation reached consensus, there remains inconsistency as to the optimal approach to treating isolated PMC injuries. Additionally, there is a need for improved PMC injury classification. **LEVEL OF EVIDENCE:** Level V.

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Indexado en: PubMed

Clippinger BB, Plucknette BF, Soldado F, Turvey BR, **Barrera-Ochoa S**, Kozin SH, Zlotolow DA.
The One-Bone Forearm in Children: Surgical Technique and a Retrospective Review of Outcomes.
J Hand Surg Am. 2021 Jun 7:S0363-5023(21)00214-8. doi: 10.1016/j.jhsa.2021.04.009. Online ahead of print.

PURPOSE: The purpose of this study was to describe a technique of end-to-end rigid fixation of the distal radius to the proximal ulna. The shortening and radioulnar overlap in this technique yield a high union rate, large corrections, and few complications. **METHODS:** This retrospective chart review from 2 centers was undertaken in 39 patients (40 forearms) who underwent one-bone forearm operations between 2005 and 2019. There were 25 male and 14 female patients, with a mean age at surgery of 9.7 years (range 3 to 19 years; SD, 4.5 years). The diagnoses included brachial plexus birth injury, spinal cord injury, arthrogryposis multiplex congenita, cerebral palsy, ulnar deficiency with focal indentation, multiple hereditary exostosis, acute flaccid myelitis, and tumor. **RESULTS:** The average follow-up was 33.5 months (1.2-110.1 months; SD, 27.1 months). The 36 forearms in supination had an average supination contracture of 93° (range, 15° to 120°; SD, 15.4°). The 4 pronated arms had an average pronation contracture of 80° (range, 50° to 120°; SD, 29.2°). The average postoperative position was 22.8° of pronation (range, -15° to 45°; SD, 12.9°). The average correction obtained with our technique was 113° (range, 20° to 145°; SD, 22.9°). Radiographic union was demonstrated in 32 (80%) of the one-bone forearms by 10 weeks, 39 (97.5%) by 16 weeks, and 40 (100%) by 24 weeks. One patient had peri-implant fractures prior to union. No forearms required reoperation for nonunion. **CONCLUSIONS:** One-bone forearm performed with this technique allows reliable healing and a large degree of correction. **TYPE OF STUDY/LEVEL OF EVIDENCE:** Therapeutic IV.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 2.230 **Quartil:** 3 **Categoría:** Orthopedics; Surger

Posición: Orthopedics 47/82; Surgery 117/212

Coelho A, Feito P, Corominas L, Sánchez-Soler JF, **Pérez-Prieto D**, Martínez-Díaz S, Alier A, **Monllau JC.**
Electric Scooter-Related Injuries: A New Epidemic in Orthopedics.
J Clin Med. 2021 Jul 25;10(15):3283. doi: 10.3390/jcm10153283.

BACKGROUND: The use of electric scooters has increased considerably as they are an accessible means of transportation. The number of injuries from falls and collisions has risen significantly. Therefore, the aim of the study was to describe demographics injury patterns of electric scooter accidents produced over one year. **METHODS:** A prospective observational study of electric scooter-related injuries presented in the emergency room from May 2019 until May 2020. The inclusion criteria was based on the direct cause of injury produced while an electric scooter was in use. Demographic data, the use of a helmet or the lack thereof,

accident mechanism, injury time, type of injury produced, and the treatment applied were collected. **RESULTS:** Over the study period, 397 patients were identified with a total of 422 injuries. The mean age was 30.8 years, with 12.6% of patients being minors. The patients mainly presented in evening hours and in summertime at the emergency department. Of the total injuries seen, 46.9% were fractures. Some 25% of the total cases required surgery. Only 19% of the riders wore a helmet at the time of the accident. Most of the fractures were to the upper limbs (62.6%). There was a greater incidence of radius fractures. **CONCLUSION:** Injuries incurred while using electric scooters are an emerging phenomenon, despite existing regulations. In this study, most injuries occurred in young men and were due to falls from the vehicle. Nearly half of those injuries were fractures to the upper limbs. Surprisingly, 50% of the fractures required surgery.

Conflict of interest statement: The authors declare no conflict of interest.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 4.241

Quartil: 1

Categoria: Medicine, General & Internal

Posición: 39/169

Esteban-Feliu I, Gallardo-Calero I, **Barrera-Ochoa S**, Vidal-Tarrasón N, **Mir X**, Lluch-Bergadà A.

Basal joint arthroplasty and carpal tunnel release comparing a single versus double incision: a prospective randomized study.

Eur J Orthop Surg Traumatol. 2021 Sep 22. doi: 10.1007/s00590-021-03086-x. Online ahead of print.

PURPOSE: Basal thumb joint osteoarthritis frequently coexists with carpal tunnel syndrome. The two conditions have traditionally been treated surgically through separate incisions. We sought to determine whether carpal tunnel release using a single incision during basal joint arthroplasty is as effective as a two-incision approach in patients with concomitant carpal tunnel syndrome and basal thumb joint osteoarthritis. **METHODS:** For this purpose, 40 patients were randomly allocated to either a single-incision or double-incision approach, all of whom completed the full follow-up period. The Boston Carpal Tunnel Questionnaire, QuickDASH, and a 10-point visual analog scale pain-severity rating were obtained from patients 3, 6 and 12 months post-operatively. **RESULTS:** The two treatment groups experienced comparable, progressive improvement in all symptom-, function-, and pain-related outcomes, with mean surgery time significantly shorter with the single-incision approach, and four versus zero patients in the double-incision group developing pillar pain ($p = 0.035$). **CONCLUSIONS:** Concomitant basal thumb joint osteoarthritis and carpal tunnel syndrome might be effectively performed through a single-incision approach, potentially avoiding any morbidity classically associated with a second incision. **LEVEL OF EVIDENCE:** Level II/Therapeutic Study. **TRIAL REGISTRATION:** ClinicalTrials.gov: NCT04391751, 04/29/2020, retrospectively registered.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 0.181

Quartil: n/a

Categoria: Surgery; Orthopedics

Posición: Surgery 188/199; Orthopedics 62/65

Esteban-Feliu I, Gallardo-Calero I, **Barrera-Ochoa S**, Lluch-Bergadà A, **Alabau-Rodriguez S**, **Mir-Bulló X**.

Analysis of 3 Different Operative Techniques for Extra-articular Fractures of the Phalanges and Metacarpals.

Hand (N Y). 2021 Sep;16(5):595-603. doi: 10.1177/1558944719873144. Epub 2019 Sep 13.

Background: Several techniques have been described for treating metacarpal and phalangeal fractures. We sought to compare the 3 techniques most frequently used for extra-articular metacarpal and phalangeal fractures: plate screw (PS), Kirschner wire (KW), and retrograde intramedullary screw (RIS) fixation. We aimed to determine whether using an RIS provides better clinical outcomes than using either a PS or a KW fixation. **Methods:** We conducted a retrospective review of patients who underwent surgical treatment of metacarpal

and phalangeal fractures from January 2011 to December 2017 in our department. Only patients with an acutely displaced short oblique or transverse extra-articular metacarpal or phalangeal fracture were included. Patients were classified into 3 groups depending on the treatment they received: PS, KW, or RIS fixation. The duration of each procedure was recorded. Clinical assessments included measuring total active motion (TAM), grip strength, and an evaluation of plain radiographs through to ultimate healing. A Disabilities of the Arm, Shoulder and Hand (QuickDASH) score was collected on all patients. Data were analyzed by analysis of variance or Kruskal-Wallis rank test, as indicated. Results: A total of 253 fractures (202 metacarpal and 51 phalangeal) in 230 patients were included in analysis. In all, 135 fractures (53.3%) underwent PS fixation; 53 (20.9%), KW fixation; and 65 (25.6%), RIS fixation. In the KW fixation group, Bouquet pinning was performed for metacarpal fractures and cross pinning for phalangeal fractures. When more than 1 fracture coexisted in the same patient, they were considered separate instances. No differences among the 3 groups were observed when evaluating mean time to radiological union, grip strength, TAM, or QuickDASH score. Mean surgery time was significantly shorter with KW (20 minutes) and RIS (25 minutes), than with PS (32 minutes). Mean return to work or routine activities time was significantly less in the RIS (7.8 weeks) group than in the PS and KW groups (8.3 and 9.2 weeks, respectively). Conclusions: Surgical treatment is recommended in patients with unstable metacarpal and phalangeal fractures. The use of RIS was associated with shorter mean surgery duration and return to work times than PS and KW, respectively.

Indexado en: PubMed

Esteban-Feliu I, Gallardo-Calero I, **Barrera-Ochoa S**, Vidal-Tarrason N, Nuñez-Camarena J, Lluch-Bergadà A. **Trigger Digit Incidence After Carpal Tunnel Release: Reconstruction in Elongated Position Versus Traditional Carpal Tunnel Release.** *Hand (N Y)*. 2021 Nov;16(6):741-745. doi: 10.1177/1558944719893055. Epub 2019 Dec 17.

Background: The development of trigger digit after carpal tunnel syndrome release surgery has been widely reported. Lluch described reconstruction of the flexor retinaculum in elongated position to prevent such complication. **Methods:** We conducted a retrospective review to determine whether patients who undergo reconstruction in elongated position of the flexor retinaculum have a lower incidence of trigger digit postoperatively. In total, 1050 patients were included, 865 of whom had undergone traditional carpal tunnel release and 185 flexor retinaculum reconstruction. **Results:** No differences were found in the incidence of trigger digit after surgery (8.7% of the patients who underwent traditional release vs 11.9% in the reconstruction group). Neither difference was found when comparing mean time with the development of trigger digit. **Conclusions:** In the absence of randomized long-term studies comparing traditional release and reconstruction in elongated position after carpal tunnel release, given our results, we see no reason to favor reconstruction over standard carpal tunnel release as a means to prevent postoperative triggering of digits.

Indexado en: PubMed

Floerkemeier T, Ezechieli M, Wirries N, Windhagen H, **Ribas M**, Budde S. **[Arthroscopic assisted mini-open arthrotomy for the treatment of the femoroacetabular impingement].** [Article in German; Abstract available in German from the publisher] *Oper Orthop Traumatol*. 2021 Dec 14. doi: 10.1007/s00064-021-00755-2. Online ahead of print.

OBJECTIVES: Treatment of pathologies of the central and peripheral compartment of the hip using arthroscopic assisted mini-open arthrotomy via the Smith-Petersen approach. **INDICATIONS:** Cam- and pincer-type femoroacetabular impingement (FAI), labral tear, loose bodies. **(RELATIVE) CONTRAINDICATIONS:** Osteoarthritis of the hip with Tönnis classification grade ≥ 2 . **SURGICAL TECHNIQUE:** After mini-open approach to the hip joint via direct anterior muscular gap, the anterior capsule is split with protection of the labrum.

Decompression allows the joint to be inspected using an arthroscope. Depending on the intra-articular findings, additional procedures can be performed (e.g., curettage of the cartilage, microfracturing, matrix-induced autologous chondrocyte implantation [MACI]). Cases with pincer-type FAI or labral tear can also be addressed. After partial release, the cam-type FAI can be resected using a surgical burr. **POSTOPERATIVE MANAGEMENT:** Partial weightbearing for 2-6 weeks with 10-20 kg or half body weight using crutches depending on the intraoperative treatment. **RESULTS:** Radiological analysis of the pre- and postoperative X-rays (n = 69) prove that this surgical technique is suitable to address pathologies especially FAI syndromes. The α -angle according to Nötzli could be reduced from a mean preoperative value of 72.8° to 49.4° postoperative. In combined cam-type and Pincer-type FAI syndrome (n = 16), the lateral center-edge angle could be reduced from a mean preoperative value of 50.2° to 37.6° postoperatively. The clinical follow-up (n = 29) revealed good midterm outcomes after arthroscopic assisted mini-open arthrotomy (modified Harris Hip Score [mHHS] 84.8 points after 4.9 years [range 4.2-5.7; \pm 0.43]).

Publisher: **ZUSAMMENFASSUNG: OPERATIONSZIEL:** Therapie von Pathologien des zentralen und peripheren Kompartiments des Hüftgelenks über eine arthroskopisch assistierte Mini-open-Arthrotomie via Smith-Petersen-Intervall. **INDIKATIONEN:** Femoroazetabuläres Impingement (FAI) Typ CAM und Typ Pincer, Labrumläsionen, lokale Knorpelläsionen, freie Gelenkkörper. **(RELATIVE) KONTRAINDIKATIONEN:** Koxarthrose mit einem Arthrosegrad nach Tönnis \geq 2. **OPERATIONSTECHNIK:** Nach einem minimal-invasiven direkt vorderen Zugang (Mini-open-Arthrotomie) zum Hüftgelenk erfolgt die Eröffnung der anterioren Gelenkkapsel unter Schonung des Labrums. Durch Distraction kann mit dem Arthroskop das Gelenk inspiziert werden. Je nach intraartikulärem Befund können weitere Maßnahmen (z. B. Knorpelkürettage, Mikrofrakturierung, MACI) erfolgen. Bei FAI-Syndrom Typ Pincer oder einer Labrumläsion können diese Pathologien problemlos adressiert werden. Nach partiellem Nachlassen der Distraction kann das Abtragen des FAI-Syndrom Typ CAM mit der Kugelkopfräse durchgeführt werden. **WEITERBEHANDLUNG:** Teilbelastung für 2 bis 6 Wochen mit 10–20 kg oder mit halbem Körpergewicht an Unterarmgehhilfen in Abhängigkeit vom intraoperativen Vorgehen. **ERGEBNISSE:** Die radiologische Analyse der prä- und postoperativen Röntgenbilder (n = 69), die aufgrund eines FAI-Syndroms operiert wurden, belegt, dass diese operative Technik gut geeignet ist, um pathologische Veränderungen zu adressieren. Der α -Winkel nach Nötzli konnte von durchschnittlich 72,8° präoperativ auf 49,4° postoperativ reduziert werden. Bei einem kombinierten FAI-Syndrom (n = 16) wurde der LCE-Winkel von präoperativ durchschnittlich 50,2° auf postoperativ 37,6° reduziert. Die klinische Nachuntersuchung (n = 29) zeigte gute mittelfristige Ergebnisse nach Behandlung des FAIs mittels arthroskopisch assistierter Mini-open-Arthrotomie (mHHS 84,8 Punkte nach 4,9 Jahren [4,2–5,7; \pm 0,43]).

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Factor Impacto: 1.154

Categoria: Orthopedics

Quartil: 4

Posición: Orthopedics 70/82

Gelber PE, Ramírez-Bermejo E, Grau-Blanes A, Gonzalez-Osuna A, Llauger J, Fariñas O.

A new computed tomography scoring system to assess osteochondral allograft transplantation for the knee: inter-observer and intra-observer agreement.

Int Orthop. 2021 May;45(5):1191-1197. doi: 10.1007/s00264-020-04927-w. Epub 2021 Jan 8.

AIM OF THE STUDY: To describe a new semiquantitative computed tomography (CT) scoring system for multi-feature analysis of cartilage defect repair by osteochondral allografts for the knee and to assess its intra-observer and inter-observer variability. **METHOD:** A semiquantitative assessment CT osteochondral allograft (ACTOCA) scoring system was designed based on fresh osteochondral allograft transplantations for the knee. The system includes five CT features: density relative to host bone, integration at the host-graft junction, surface percentage with a discernible cleft at the host-graft junction, cystic changes, and intra-articular fragments. Inter-observer variability was calculated by three observers blinded to the patient's medical history and treatment.

Intra-observer variability was also determined. RESULTS: Inter-observer agreement was moderate to substantial for all CT score components and intra-observer agreement was moderate to almost perfect for all CT score components ($\kappa > 0.5$, $p < 0.05$). CONCLUSION: The ACTOCA score is a reliable tool to evaluate integration of osteochondral allograft transplantations. It provides an accurate evaluation of bone changes and may help to standardize CT scan reports following osteochondral allograft transplantation for the knee.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 3.075

Quartil: 2

Categoría: Orthopedics

Posición: 24/82

Lakhani K, Mimendia I, Porcel JA, Martín-Domínguez LA, Guerra-Farfán E, Barro V.

Direct anterior approach provides better functional outcomes when compared to direct lateral approach in hip hemiarthroplasty following femoral neck fracture.

Eur J Orthop Surg Traumatol. 2021 Mar 24. doi: 10.1007/s00590-021-02941-1. Online ahead of print.

PURPOSE: This study aims to compare the differences between direct anterior approach (DAA) and direct lateral approach (DLA) in hip hemiarthroplasty (HHA) after displaced femoral neck fracture (FNF) in early functional outcome, hospital length of stay, morbidity and mortality rates. **METHODS:** This non-interventional retrospective study, carried out at a tertiary trauma centre within the Spanish National Health System, included all patients who underwent a bipolar HHA between 1st January 2018 and 31st December 2019 performed by 2 of our hip unit surgeons. **RESULTS:** A total of 94 patients were included (40 in DAA group and 54 in DLA group). Median follow-up was 19.2 months (range 8-30.8 months). Postoperative degree of mobilisation showed statistically significant differences in favour of DAA group, where 35% of patients were able to walk with no assistance after surgery. DAA group had 1 day less of hospitalisation in contrast with DLA group overall (8 days vs 9 days, respectively, $p < 0.05$). Statistically significant differences were not detected in comparing postoperative complications, re-operations rates or 6-months mortality rate. **CONCLUSION:** Our study highlights the benefits of DAA for HHA after displaced FNF in terms of postoperative mobilisation degree and hospitalisation length of stay when compared to DLA.

Indexado en: PubMed/WOS/SRJ/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 0.181

Quartil: n/a

Categoría: Orthopedics; Surgery

Posición: Orthopedics 188/199; Surgery 62/65

Marot V, Sanchis-Alfonso V, Perelli S, Gelber PE, Sánchez Rábago CJ, Ginovart G, Monllau JC.

Isolated reconstruction of medial patellofemoral ligament with an elastic femoral fixation leads to excellent clinical results.

Knee Surg Sports Traumatol Arthrosc. 2021 Mar;29(3):800-805. doi: 10.1007/s00167-020-06016-2. Epub 2020 May 1.

PURPOSE: The primary objective was to compare the functional outcomes after an isolated MPFL reconstruction using either a quasi-anatomical technique (group A) or an anatomical MPFL reconstruction (group B). The secondary objectives were to compare the rates of redislocation, range-of-motion and subjective patellar instability (Smillie est). **METHODS:** A multicenter longitudinal prospective comparative study was performed. Group A had 29 patients and 28 were included in Group B. Patients with trochlear dysplasia types C and D and patients who had undergone a trochleoplasty, a distal realignment or patella distalization concurrently with MPFL reconstruction were excluded. The main evaluation criterion was the Kujala functional score. **RESULTS:** The mean postoperative Kujala was 90.4 (89.4 in group A and 92.1 in group B). Upon comparing the mean difference between pre- and post-operative values, no differences were detected between the two groups (n.s). **CONCLUSIONS:** Isolated quasi-anatomical MPFL reconstruction using a gracilis tendon autograft for recurrent patellar dislocation provides outcomes as good as the isolated anatomical MPFL reconstruction in

patients with no trochlear dysplasia up to those with trochlear dysplasia type A and B at the 2-5 years follow-up.**LEVEL OF EVIDENCE:** Level IV.

Indexado en: PubMed

Montiel V, Pérez-Prieto D, Perelli S, Monllau JC.

Fellows and Observers Are Not a Problem for Infection in the Operating Rooms of Teaching Centers.

Trop Med Infect Dis. 2021 Mar 31;6(2):43. doi: 10.3390/tropicalmed6020043.

PURPOSE: The aim of the present study was to determine whether the risk of complications increases with the number of people in the operating room (OR). Several studies have stated that an increased number of people in the OR increases not only the risk of infection but also the risk of intraoperative complications due to distractions during the surgery.**MATERIALS AND METHODS:** This retrospective study included all patients who had surgery between January 2017 and January 2018 in an OR with the usual surgical team and three or more observers. Patient demographic data, surgical details (duration of the surgery, the surgery being open or arthroscopic, and whether a graft was used), and intraoperative and postoperative complications were recorded.**RESULTS:** A total of 165 surgeries were recorded, with a mean operating time of 70 min (40% open surgeries, 37% arthroscopic surgeries, and 23% combined open and arthroscopic procedures). The main intraoperative complications were vessel damage, nerve damage, premature cement setting, and leg-length discrepancy, with 1 case each. The main postoperative complications were rigidity (8 cases), unexplained pain (11 cases), failed meniscal suturing (3 cases), a postoperative stress fracture (1 case), correction loss in osteotomy (1 case), and wound problems not related to infection (1 case). There were no cases of infection.**DISCUSSION:** The present study shows that the complication rate when having observers in the OR is comparable to the reported data. The key to avoiding complications is for everyone to comply with basic OR behavior.

Indexado en: PubMed/WOS/SRJ/JCI/Emerging sources Citation Index (ESCI)

Journal Citation Index: 0.60

Quartil: 3

Categoría: Infectious Diseases; Parasitology

Posición: Infectious Diseases 71/117 Parasitology 23/42

Morales-Avalos R, Masferrer-Pino Á, Ruiz-Chapa E, Padilla-Medina JR, Vilchez-Cavazos F, Peña-Martínez V, Elizondo-Omaña R, Perelli S, Guzmán-López S, García-Quintanilla JF, Monllau JC

MRI evaluation of the peripheral attachments of the lateral meniscal body: the menisco-tibio-popliteus-fibular complex.

Knee Surg Sports Traumatol Arthrosc. 2021 Jun 17. doi: 10.1007/s00167-021-06633-5. Online ahead of print.

PURPOSE: To determine, identify and measure the structures of the menisco-tibio-popliteus-fibular complex (MTPFC) with magnetic resonance imaging (MRI) in knees without structural abnormalities or a history of knee surgery. **METHODS:** One-hundred-and-five knees without prior injury or antecedent surgery were analyzed by means of MRI. The average age was 50.1 years \pm 14.8. All the measurements were performed by three observers. The peripheral structures of the lateral meniscus body were identified to determine the location, size, and thickness of the entire MTPFC. The distance to other "key areas" in the lateral compartment was also studied and compared by gender and age.**RESULTS:** The lateral meniscotibial ligament (LMTL) was found in 97.1% of the MRIs, the popliteofibular ligament (PFL) in 93.3%, the popliteomeniscal ligaments (PML) in 90.4% and the meniscofibular ligament (MFL) in 39%. The anteroposterior distance of the LMTL in an axial view was 20.7 mm \pm 3.9, the anterior thickness of the LMTL was 1.1 mm \pm 0.3, and the posterior thickness of the LMTL 1.2 mm \pm 0.1 and the height in a coronal view was 10.8 mm \pm 1.9. The length of the PFL in a coronal view was 8.7 mm \pm 2.5, the thickness was 1.4 mm \pm 0.4 and the width in an axial view was 7.8 mm \pm 2.2.**CONCLUSIONS:** The MTPFC has a constant morphological and anatomical pattern for three of its main ligaments and can be

easily identified and measured in an MRI; the MFL has a lower prevalence, considering a structure difficult to identify by 1.5 T MRI.

Indexado en: PubMed

Morales-Avalos R, Castillo-Escobedo TA, Elizondo-Omaña RE, Del Carmen Theriot-Giron M, **Perelli S**, Guzmán-López S, Peña-Martínez VM, Vílchez-Cavazos F, **Monllau JC**.

The morphology of the tibial footprint of the anterior cruciate ligament changes with ageing from oval/elliptical to C-shaped.

Knee Surg Sports Traumatol Arthrosc. 2021 Mar;29(3):922-930. doi: 10.1007/s00167-020-06049-7. Epub 2020 May 8.

PURPOSE: To further the current understanding of the modifications of the morphology of the ACL tibial footprint in healthy knees during the ageing process. The hypothesis is that there are differences in the morphology of the ACL tibial footprint between the cadavers of the young and elderly due to a degenerative physiological process that occurs over time. **METHODS:** The tibial footprint of the ACL was dissected in 64 knee specimens of known gender and age. They were divided into four groups by age and gender, setting 50 years of age as the cut-off point. Three observers analyzed the tibial footprint dissections and the shape was described and classified. **RESULTS:** The knees from the cadavers of males older than 50 years of age presented a "C" morphology in 85% of the cases. In the group of males aged less than 50 years, an oval/elliptical morphology was found in 85.7% of the cases. In the group of women over 50 years-old, the "C" morphology was observed in 82.3% of the cases. In women under the age of 50, the oval/elliptical morphology was found in 84.6% of the cases. A significant difference was observed between the prevalence rates of the morphologies of the younger and older groups ($p < 0.001$ for both genders). However, no differences were observed between males and females of the same age group (n.s.). **CONCLUSIONS:** The morphology of the tibial footprint of the ACL presents significant variations with ageing. It can go from an oval/elliptical shape to a "C" shaped morphology. The results of this work make for an advance in the individualization of ACL reconstruction based on the age and the specific morphology of the tibial footprint.

Indexado en: PubMed

Morales-Avalos R, **Perelli S**, Raygoza-Cortez K, Padilla-Medina JR, Peña-Martínez VM, Guzmán-López S, Zavala JMD, Barrera FJ, Vilchez-Cavazos F, **Monllau JC**.

Fixed-bearing unicompartmental knee arthroplasty provides a lower failure rate than mobile-bearing unicompartmental knee arthroplasty when used after a failed high tibial osteotomy: a systematic review and meta-analysis.

Knee Surg Sports Traumatol Arthrosc. 2021 Aug 20. doi: 10.1007/s00167-021-06707-4. Online ahead of print.

Despite the fact that the choice of bearing design has been thought to influence the functional outcomes and longevity of unicompartmental knee arthroplasty (UKA), there is a lack of clinical evidence supporting the decision-making process in patients who have undergone high tibial osteotomy (HTO). A systematic review of studies was carried out that reported the outcomes of fixed-bearing (FB) or mobile-bearing (MB) medial UKA in patients with a previous HTO. A random effect meta-analysis using a generalized linear mixed-effects model to calculate revision rates was done. Seven retrospective cohort studies were included for this study. Regarding the fixation method, 40 were the FB-UKA and 47 were MB-UKA. For both groups, the mean post-operative follow-up was 5.8 years. The survival rates were 92% for the FB-UKA with a mean follow-up of 10 years. For the MB-UKA, it ranged from 35.7 to 93%, with a mean follow-up of 4.2 years. For the FB, the time to revision was reported as 9.3 years, while 1.2, 2.5 and 2.91 years was reported for the MB. The results of the meta-analysis showed that the revision rate for the patients receiving a FB-UKA after failed HTO was 8%, compared to 17% in those who received an MB-UKA. The results of the review suggest that the use of the FB-UKA is associated with lower

revision rates and a longer survival time than the MB-UKA and have similar functional ability scores. Level of evidence: III (systematic review of level-III studies).

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Indexado en: PubMed

Mouton C, Moksnes H, Janssen R, Fink C, Zaffagnini S, **Monllau JC**, Ekås G, Engebretsen L, Seil R.
Preliminary experience of an international orthopaedic registry: the ESSKA Paediatric Anterior Cruciate Ligament Initiative (PAMI) registry.
J Exp Orthop. 2021 Jun 25;8(1):45. doi: 10.1186/s40634-021-00366-7.

Paediatric and adolescent ACL injuries are an emerging health burden, increasing at a higher rate than in adults. They compromise quality of life, affect knee structure and function, lead to the early development of osteoarthritis and are a serious economic burden due to shortened professional careers and subsequent surgeries. Up to 35% of children and adolescents will experience a second ACL injury and this population particularly at high risk of secondary intraarticular soft tissue degeneration and growth abnormalities. However, there is still a lack of high-quality outcome studies on this specific population and many knowledge gaps persist in the current treatment guidelines. It is currently unknown whether ACL reconstruction in this young population decreases the risk of irreversible secondary intraarticular soft tissue degeneration. Furthermore, it is not known whether return to high or elite level sports after paediatric ACL injury or reconstruction should be recommended. The relatively low number of paediatric ACL injuries seen in each hospital makes it necessary to conduct international multi-centre studies to collect robust data to provide evidence-based guidelines for the treatment of these injuries. The Paediatric Anterior Cruciate Ligament Initiative (PAMI) was thus started by the European Society of Sports Traumatology, Knee Surgery & Arthroscopy and opened for patient inclusion in 2018. This comprehensive overview of the first 2 years of the PAMI registry shows that the project is now well consolidated and accepted by the European orthopaedic community. Future challenges include ensuring additional external funding to ascertain long term sustainability and continuous dissemination of the knowledge acquired in scientific journals.

Indexado en: PubMed

Pujol O, Mimendia I, **Martin-Dominguez L**, Amat C, Barro V.
Simultaneous bilateral dual mobility total hip arthroplasty dislocation in a patient with hepatic encephalopathy: A case report.
Int J Surg Case Rep. 2021 Mar;80:105705. doi: 10.1016/j.ijscr.2021.105705. Epub 2021 Feb 25.

INTRODUCTION AND IMPORTANCE: Dislocation is a severe complication after total hip arthroplasty (THA). It is one of the most common reasons for failure and revision surgery. This is the first case of a documented simultaneous bilateral dual mobility (DM) THA dislocation. **CASE PRESENTATION:** A forty-nine-year-old man presented with bilateral hip pain, immobility and deformity. X-ray images demonstrated simultaneous bilateral posterior THA dislocation. Previously, the patient had presented atraumatic dislocations recurrently. When he was thoroughly re-interrogated, he complained of uncontrolled and generalized muscle contractions, which were compatible with myoclonus due to hepatic encephalopathy (HE). Multidisciplinary treatment was performed satisfactorily to control myoclonus symptomatology and to prevent dislocation. **CLINICAL DISCUSSION:** Patient's most important risk factor was a neuromuscular disorder, which we initially gave little notice and undervalued. HE is a serious but reversible syndrome, observed in patients with liver dysfunction. It leads to a wide spectrum of neuropsychiatric abnormalities. Management is based on prevention of episodes, avoiding the underlying triggers. Due to the high risk for dislocation of our patient, we decided to use DM cups bilaterally. This system has demonstrated lower rates of dislocation. **CONCLUSION:** This case report reminds us

that a careful evaluation through meticulous history and physical examination are mandatory when faced with recurrent instability. Furthermore, prevention of dislocation is vastly preferable to treating this challenging complication. High-risk patients should be identified, and appropriate surgical approach, technique and implants have to be collectively used to reach a strategy that mitigates and ideally prevents dislocation.

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Indexado en: PubMed/WOS/JCR/JCI/Emerging sources Citation Index (ESCI)
Journal Citation Index: 0.27 **Quartil:** 4 **Categoría:** Surgery **Posición:** Surgery 219/271

Ramon S, **Español A**, Yebra M, Morillas JM, Unzurrunzaga R, Freitag K, Gómez S, Aranzabal JR.
Ondas de choque. Evidencias y recomendaciones SETOC (Sociedad Española de Tratamientos con Ondas de Choque)
Rehabilitacion (Madr). 2021 Oct-Dec;55(4):291-300. doi: 10.1016/j.rh.2021.02.002.

This SETOC consensus document shows the scientific evidence of the technology in shockwaves (SW) and radial pressure waves (RPW) in a variety of spasticity disorders, musculoskeletal, skin, urological diseases, etc. SW and RPW, without anesthesia, are an effective, safe, non-invasive, cost-effective treatment, which reduces the need for surgery, lower risk of complications, faster recovery and greater acceptability to patients than surgery. Consequently, SW and RPW should be the first therapeutic option in the aforementioned chronic pathologies, when conservative alternatives have failed. SETOC advises to follow the recommendations given in this article, including the ones given by SW scientific societies and best evidence for each technology as well.

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Indexado en: PubMed

De la Red-Gallego MA, **Barrera-Ochoa S**, Sanchez Crespo MR.
Total thumb carpometacarpal arthroplasty for failed trapeziometacarpal joint arthrodesis.
Hand Surg Rehabil. 2021 Jun;40(3):347-349. doi: 10.1016/j.hansur.2020.12.014. Epub 2021 Feb 25.

Trapeziometacarpal joint arthrodesis is a surgical option for osteoarthritis of the first carpometacarpal joint; however, it has well-known disadvantages such as non-union and reduced mobility. Revision procedures are often not discussed and lack consensus. We are reporting two cases of satisfactory thumb implant arthroplasty for failed trapeziometacarpal joint arthrodesis in order to discuss the surgical technique, its advantages compared with other surgical options and therefore its potential indications.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)
Factor Impacto: 0.969 **Quartil:** 4 **Categoría:** Orthopedics; Surgery
Posición: Orthopedics 74/82; Surgery 194/212

Rojas G, **Perelli S**, **Ibanez M**, **Formagnana M**, Ormazabal I, **Monllau JC**.
Effect of Modified Lemaire Anterolateral Extra-articular Tenodesis on the Magnetic Resonance Imaging Maturity Signal of Anterior Cruciate Ligament Hamstring Graft.
Am J Sports Med. 2021 Jul; 49(9):2379-2386. doi: 10.1177/03635465211018858. Online ahead of print.

BACKGROUND: Lateral extra-articular tenodesis (LET) is one of the most widely used procedures to restore anterolateral stability. Clinical outcomes after the addition of LET to anterior cruciate ligament (ACL) reconstruction (ACLR) have been widely investigated; however, the potential influence of LET on the ACL ligamentization process has not been examined. **PURPOSE/HYPOTHESIS:** The purpose was to use 10-month postoperative magnetic resonance imaging (MRI) scans to determine whether the maturity of grafts after hamstring autograft ACLR was affected by concomitant LET. The hypothesis was that when modified Lemaire lateral extra-articular tenodesis (MLLET) was performed, the MRI parameters of ACL graft maturity would be modified. **STUDY DESIGN:** Cohort study; Level of evidence, 3. **METHODS:** The study included patients treated between December 2017 and December 2018 who had undergone anatomic 3-strand hamstring tendon autograft ACLR, with or without concomitant MLLET, and had undergone MRI 10 months postoperatively. Thus, the study included 30 patients who had isolated ACLR and 22 patients who had ACLR plus MLLET. The 2 groups were comparable based on all criteria analyzed. To evaluate graft maturity, the signal-to-noise quotient (SNQ) was measured in 3 regions of interest of the proximal, midsubstance, and distal ACL graft. Lower SNQ ratios indicate less water content and, theoretically, better maturity and healing of the graft. **RESULTS:** The mean \pm SD for SNQ was 4.62 ± 4.29 (range, 3.12-6.19) in the isolated ACLR group and 7.59 ± 4.68 (range, 4.38-8.04) in the ACLR plus MLLET group ($P = .012$). Upon comparing the mean values of the 3 portions between the 2 groups, we found a significant difference between the 2 groups for the proximal and middle portions ($P = .007$ and $P = .049$, respectively) but no difference in the distal portion ($P = .369$). **CONCLUSION:** At the 10-month follow-up, hamstring tendon autografts for anatomic ACLR with MLLET did not show the same MRI signal intensity compared with isolated hamstring anatomic ACLR.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.202

Quartil: 1

Categoría: Orthopedics; Sports Sciences

Posición: Orthopedics 3/82; Sports Sciences 7/88

Sánchez-Soler J, Coelho A, **Torres-Claramunt R**, Gasol B, Fontanellas A, **Perelli S**, Hinarejos P, **Monllau JC**. **Proximal Tibiofibular Dislocation in Closing-Wedge High Tibial Osteotomy Increases the Risk of Medium and Long-Term Total Knee Replacement.** *J Clin Med.* 2021 Jun 22;10(13):2743. doi: 10.3390/jcm10132743.

Proximal tibiofibular dislocation in closing-wedge high tibial osteotomy increases the risk of medium and long-term total knee replacement. **Background:** High tibial osteotomy is an effective treatment for medial osteoarthritis in young patients with varus knee. The lateral closing-wedge high tibial osteotomy (CWHTO) may be managed with tibiofibular dislocation (TFJD) or a fibular head osteotomy (FHO). TFJD may lead to lateral knee instability and thereby affect mid- and long-term outcomes. It also brings the osteotomy survival rate down. **Objective:** To compare the CWHTO survival rate in function of tibiofibular joint management with TFJD or FHO, and to determine whether medium and long-term clinical outcomes are different between the two procedures. **Material & Methods:** A retrospective cohort study was carried out that included CWHTO performed between January 2005 to December 2018. Those patients were placed in either group 1 (FHO) or Group 2 (TFJD). Full-leg weight-bearing radiographs were studied preoperatively, one year after surgery and at final follow-up to assess the femorotibial angle (FTA). The Rosenberg view was used to assess the Ahlbäck grade. The Knee Society Score (KSS) was used to assess clinical outcomes and a Likert scale for patient satisfaction. The total knee replacement (TKR) was considered the end of the follow-up and the point was to analyze the CWHTO survival rate. A sub-analysis of both cohorts was performed in patients who had not been FTA overcorrected after surgery (postoperative FTA $\leq 180^\circ$, continuous loading in varus). **Results:** A total of 230 knees were analyzed. The follow-up period ranged from 24-180 months. Group 1 (FHO) consisted of 105 knees and group 2 (TFJD) had 125. No preoperative differences were observed in terms of age, gender, the KSS, FTA or the Ahlbäck scale; neither were there any differences relative to postop complications. The final follow-up FTA was 178.7° (SD 4.9) in group 1 and 179.5° (SD 4.2) in group 2 ($p = 0.11$). The Ahlbäck was 2.21 (SD 0.5) in group 1 and 2.55 (SD 0.5) in group 2 ($p = 0.02$) at the final follow-up. The final KSS knee values were similar for group 1 (86.5 ± 15.9) and group 2 ($84.3 \pm$

15.8). Although a non-significant trend of decreased HTO survival in the TFJD group was found ($p = 0.06$) in the sub-analysis of non-overcorrected knees, which consisted of 52 patients from group 1 (FHO) and 58 from group 2 (TFJD), 12.8% of the patients required TKR with a mean of 88.8 months in group 1 compared to 26.8% with a mean of 54.9 months in the case of group 2 ($p = 0.005$). However, there were no differences in clinical and radiological outcomes. **Conclusion:** TFJD associated with CWHTO shows an increase in the conversion to TKR at medium and long-term follow-up with lower osteotomy survival than the CWHTO associated with FHO, especially in patients with a postoperative FTA $\leq 180^\circ$ (non-overcorrected). There were no differences in clinical, radiological or satisfaction results in patients who did not require TKR. Level of evidence III. Retrospective cohort study.

Indexado en: PubMed/WOS/JCR /JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 4.241

Quartil: 1

Categoría: Medicine, General & Internal

Posición: 39/169

Soldado F, **Barrera-Ochoa S**, **Campillo-Recio D**, Nguyen-Saint-Paul Q, Cherqaoui A, Knörr J.

Free vascularized iliac periosteal graft for bilateral forearm nonunion reconstruction in a child with bilateral transfemoral amputation.

Microsurgery. 2021 Sep;41(6):579-583. doi: 10.1002/micr.30782

Vascularized periosteal flaps have been reported as very effective for treating biologically complex bone nonunion in pediatric patients, owing to their high angiogenic and osteogenic potentials. The purpose of this article is to report a case of a 6-year-old patient with nonunion involving both forearms and a very limited bone flap donor site in the context of prior bilateral transfemoral amputation due to meningococcal sepsis. Two free vascularized iliac periosteal flaps (VIPF), supplied by the deep circumflex iliac vessels, were used in two stages to reconstruct the forearms. In the first stage, the left forearm, which had a diaphyseal bone defect of 5 cm diameter in the ulna and 4 cm in the radius, was combined with an iliac-crest bone allograft, fixed with two longitudinal 1.8 mm Kirschner wires and surrounded with a free VIPF of 24 cm². Consolidation was achieved 3 months after left forearm surgery, while complete allograft revascularization and remodeling was observed at 12 months. In the second stage, the right forearm, which had a diaphyseal bone defect of 3 cm diameter in the ulna and 1 cm in the radius, was fixed the radius with a 2.7 mm plate and surrounded with a free VIPF of 24 cm². The radius nonunion healed 6 weeks after surgery. There were no postoperative complications. Two years postoperatively, the patient had again resumed his arm gait painlessly and without a splint. VIPF may be considered a valuable and reliable surgical option for nonunion reconstruction in complex clinical scenarios in children.

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Indexado en: PubMed/WOS/JCR /JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 2.425

Quartil: 2

Categoría: Surgery

Posición: 106/212

Vilà-Canet G, Covaro A, Isart A, Cáncer D, Ciccolo F, de Frutos AG, Ubierna M, Cáceres E.

Elective Lumbar Spine Surgery in Depressed Patients: Is it Worth it?

Int J Spine Surg. 2021 Jun;15(3):418-422. doi: 10.14444/8062. Epub 2021 May 7.

BACKGROUND: The objective of this study is to compare surgical results (pain, function, and satisfaction) between a group of depressed patients and a nondepressed group who had been operated on for a degenerative lumbar condition. **METHODS:** Prospective observational study. Preoperative pain (lumbar and radicular visual analog scale [VAS]), function (Oswestry Disability Index [ODI]), and depression (Zung depression scale) data were collected in patients listed to be operated on for a lumbar degenerative condition. One year postoperatively, ODI and VAS data were collected again as well as a satisfaction question (are you satisfied with the surgical results? Yes/no). **RESULTS:** Ninety-seven patients were included in the study, 78 nondepressed

patients (80.4%) and 19 depressed patients (19.6%). Preoperatively, depressed patients had more lumbar pain ($P = .00$) and more functional limitation ($P = .01$) than nondepressed patients. One year postoperatively, depressed patients had more radicular pain ($P = .029$) and more functional limitation ($P = .03$) than nondepressed patients. The overall improvement of pain and function was similar between both groups (not significant). Seventy percent of depressed patients and 80% of nondepressed patients were satisfied with the surgical outcome ($P = .52$) 1 year postoperatively. **CONCLUSION:** Depressed patients experience the same overall level of improvement as nondepressed patients, despite having more pain and functional limitation preoperatively and 1 year after elective lumbar spine surgery than nondepressed patients. The level of satisfaction does not differ significantly between the two groups. **LEVEL OF EVIDENCE:** 2.

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Indexado en: PubMed/WOS/JCR /JCI/Emerging sources Citation Index (ESCI)

Journal Citation Index: 0.51

Quartil: 3

Categoría: Surgery

Posición: 158/271

Wang CK, Cohen D, Kay J, Almasri M, Simunovic N, **Cardenas-Nylander C**, Ranawat AS, Ayeni OR.

The Effect of Femoral and Acetabular Version on Outcomes Following Hip Arthroscopy: A Systematic Review.
J Bone Joint Surg Am. 2021 Nov 24. doi: 10.2106/JBJS.21.00375. Online ahead of print.

BACKGROUND: Torsional hip deformities are common among patients undergoing hip arthroscopy. However, recent studies have suggested conflicting outcomes following arthroscopy in the setting of abnormal hip version. The purpose of this study was to systematically evaluate the literature and determine the impact of femoral and acetabular version on patient-reported outcomes following primary arthroscopic hip surgery.

METHODS: This study was conducted in accordance with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) statement. Studies investigating femoral and acetabular version in primary hip arthroscopy with clinical outcomes were identified, and data were extracted in duplicate. **RESULTS:** Overall, 11 studies met inclusion criteria and comprised 1,297 hips (726 femora and 571 acetabulae), with a mean patient age of 29.2 years (range, 14 to 74.7 years). In patients with acetabular retroversion, there was no significant difference, when compared with the normal acetabular version group, in the modified Harris hip score (mHHS), the Hip Outcome Score-Sports Specific Subscale (HOS-SSS), and visual analog scale (VAS) pain scores postoperatively. Among patients with femoral retroversion, in 2 of 3 studies, the authors reported no difference in mHHS postoperatively compared with patients with normal femoral version. In patients with high femoral anteversion, in 2 of 3 studies, the authors reported a significant difference in postoperative mHHS favoring patients with normal femoral version. Studies examining high femoral anteversion included patients with borderline hip dysplasia and patients who underwent concurrent psoas-lengthening procedures. **CONCLUSIONS:** Although the definition of the normal version of the hip varied within the literature, hip arthroscopy in patients with acetabular retroversion resulted in no difference in functional outcomes compared with patients with normal version. Postoperative functional outcomes in patients with femoral retroversion and high femoral anteversion were mixed, although the procedure was possibly less effective in high femoral anteversion combined with specific clinical scenarios. Further prospective studies based on standardized definitions and version analysis techniques would be useful in identifying the precise surgical indications for safe arthroscopic surgical procedures in patients with version abnormalities of the femur and acetabulum, particularly those with high femoral anteversion and retroversion. **LEVEL OF EVIDENCE:** Prognostic Level IV. See Instructions for Authors for a complete description of levels of evidence.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 5.284

Quartil: 3

Categoría: Orthopedics; Surgery

Posición: Orthopedics 5/82; Surgery 20/211

Wirries N, Ezechieli M, Schwarze M, Derksen A, Budde S, **Ribas M**, Windhagen H, Floerkemeier T.

The lateral joint space width is essential for the outcome after arthroscopically assisted mini-open arthrotomy for treatment of a femoroacetabular impingement: an analysis of prognostic factors for the success of this hip-preserving technique.

Int Orthop. 2021 Aug 19. doi: 10.1007/s00264-021-05181-4. Online ahead of print.

PURPOSE: The purpose of this study was to analyze predicting factors for a conversion to a total hip replacement (THR) after mini-open arthrotomy for treatment of femoroacetabular impingement (FAI). **METHODS:** Between 2011 and 2016, we identified 32 patients, who were treated for FAI with a mini-open arthrotomy and received after mean time of 2.1 ± 1.4 years a THR. These patients were compared to 47 cases who did not receive a THR (mean follow-up: 4.3 ± 0.7 years) to explore pre- and intra-operative factors associated with a conversion to THR. The results were presented in separated Kaplan-Meier curves with log rank test for significance and hazard ratios. **RESULTS:** A lateral joint space width of > 4 mm showed a higher THR-free survival rate compared to < 4 mm ($p = 0.001$); analogously one-sided (acetabular/femoral) 3-4° cartilage damage had a comparable THR-free survival rate than 1-2° kissing lesions ($p = 0.001$). Furthermore, an intact labrum without treatment and good cartilage status, a refixed labrum after rim resection in case of a pincer type FAI, or a refixed teared labrum were associated with a longer THR-free time than an untreated labrum accompanied by a poor cartilage status or an ossified labrum ($p = 0.002$). The strongest independent factor for a conversion to THR was femoral cartilage damage grade 1 and higher ($p = 0.046$). However, the rate of available patients was 53.0%. **CONCLUSION:** The success of a joint-preserving mini-open arthrotomy seems to be dependent on the status of the radiological joint space width and the intra-operative cartilage status of the lateral edge.

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Indexado en: PubMed/WOS/JCR /JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 3.075

Quartil: 2

Categoría: Orthopedics

Posición: 24/82

Zimmerer A, **Ramirez L**, **Astarita E**, **Bellotti V**, **Cárdenas C**, **Ribas M**.

[Arthroscopically assisted minimally invasive symphysioplasty for the treatment of pubic related groin pain].

[Article in German; Abstract available in German from the publisher]

Oper Orthop Traumatol. 2021 Dec 8. doi: 10.1007/s00064-021-00753-4. Online ahead of print.

OBJECTIVE: Therapy of pubic related groin pain via minimally invasive symphysioplasty. **INDICATIONS:** Therapy of refractory pubic related groin pain based on osteitis pubis. **CONTRAINDICATIONS:** Groin pain from causes other than pubic related groin pain. **SURGICAL TECHNIQUE:** After a minimally invasive approach, an incision in the anterior capsule is made while protecting the dorsal capsule parts and the arcuate pubic ligament. The symphysis end plates are remodeled arthroscopically assisted using a surgical burr. The newly created pubic symphysis joint is filled with autogenous fibrin to support the formation of a new discus interpubicus. **POSTOPERATIVE MANAGEMENT:** Partial weight-bearing for 4 weeks with 20 kg using crutches is recommended. During the first 4 weeks the range of motion should be restricted. **RESULTS:** Since 2010, 10 athletes (7 men, 3 women; average age 34.1 ± 7.8 (23-47) years) have undergone arthroscopically assisted minimally invasive symphysioplasty and treatment of femoroacetabular impingement syndrome. The average follow-up time was 5.1 (2-9) years. All patients returned to their sport level. The mean preoperative Nonarthritic Hip Score (NAHS) of 64.4 ± 15.1 (32.1-86.5) points improved to a mean postoperative NAHS of 91.4 ± 9.8 (62.4-98.75) points ($p < 0.0001$). The average patient satisfaction (scale 0 to 10; 10 highest satisfaction) was 9.8 ± 0.4 (9-10).

Publisher: **ZUSAMMENFASSUNG:** **OPERATIONSZIEL:** Therapie des schambeinbedingten Leistenschmerzes über eine minimal-invasive Symphysioplastik. **INDIKATIONEN:** Therapierefraktärer schambeinbedingter Leistenschmerz auf Basis einer Osteitis pubis. **KONTRAINDIKATIONEN:** Leistenschmerz anderer Genese. **OPERATIONSTECHNIK:** Nach minimal-invasivem Zugang erfolgt die Eröffnung der anterioren Kapsel unter Schonung der dorsalen Kapselanteile und des Ligamentum arcuatum pubis. Die Symphysenendplatten werden mittels Kugelfräse arthroskopisch assistiert remodelliert. Die neu geschaffene Schambeinfuge wird mit autogenem Fibrin gefüllt, um die Bildung eines Neodiskus zu unterstützen. Abschließend erfolgt der schichtweise Wundverschluss. **WEITERBEHANDLUNG:** Teilbelastung mit 20 kg an Unterarmgehstützen für 4 Wochen, danach langsames Aufbelasten. In den ersten 4 Wochen sollte die Flexion auf 60° und die Innenrotation auf 10° eingeschränkt werden. **ERGEBNISSE:** Seit 2010 bis 2018 wurden 10 Sportler (7 männlich, 3 weiblich; Durchschnittsalter 34,1 ± 7,8 [23–47] Jahre) mittels arthroskopisch assistierter, minimal-invasiver Symphysioplastik und operativer Therapie des femoroazetabulären Impingementsyndroms behandelt. Die durchschnittliche Nachuntersuchungszeit betrug 5,1 (2–9) Jahre. Alle Patienten konnten zu ihrem Sportniveau zurückkehren. Der Non-Arthritic Hip Score (NAHS) zeigt zum Follow-up-Zeitpunkt einen signifikanten Anstieg von 64,4 ± 15,1 (32,1–86,5) auf 91,4 ± 9,8 (62,4–98,75) Punkte ($p < 0,0001$). Die durchschnittliche Patientenzufriedenheit (Skala 0 bis 10; 10 höchste Zufriedenheit) lag bei 9,8 ± 0,4 (9–10).

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Factor Impacto: 1.154

Categoria: Orthopedics

Quartil: 4

Posición: Orthopedics 70/82

INSTITUT OFTALMOLÒGIC QUIRON SALUD DEXEUS

Nº Artículos indexados: 1

Factor de Impacto total: 3.005

Factor impacto medio x artículo: 3.005

Garcia-Alfaro P, Garcia S, Rodriguez I, Vergés C.

Dry eye disease symptoms and quality of life in perimenopausal and postmenopausal women.

Climacteric. 2021 Jun;24(3):261-266. doi: 10.1080/13697137.2020.1849087. Epub 2020 Dec 7.

OBJECTIVE: This study aimed to evaluate dry eye disease (DED) symptoms and quality of life (QoL) in a group of perimenopausal and postmenopausal women, based on the Ocular Surface Disease Index (OSDI) questionnaire.

METHODS: An observational study was performed in a group of 1947 perimenopausal and postmenopausal women, aged between 45 and 79 years. The personal data collected were age, menopause status, age at menopause, and OSDI score. **RESULTS:** The mean age of the group was 54.18 ± 6.84 years, with a mean age at menopause of 49.45 ± 4.02 years. The average OSDI score was 29.20 ± 19.4 . The overall prevalence of DED symptoms was 79%, increasing significantly in postmenopausal women, 76.4% vs. 80.5% ($p = 0.029$). In our group, 37.7% had severe DED symptoms. Ocular symptoms, vision-related functions, and environmental trigger scores were higher in postmenopausal women, leading to a lower QoL. The severity of OSDI score increases with age (β coefficient: 0.15 [95% confidence interval: 0.02; -0.28]), while the severity of OSDI score decreases with a later onset age of menopause (β coefficient: -0.27 [95% confidence interval: -0.55; -0.01]). **CONCLUSIONS:** DED symptoms are highly prevalent in perimenopausal and postmenopausal women. Postmenopausal women had a higher prevalence of symptoms and higher OSDI scores than perimenopausal women. The severity of DED symptoms and vision-related functions leads to poorer QoL.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 3.005

Quartil: 2

Categoria: Obstetrics & Gynecology

Posición: 33/83

INSTITUTO ONCOLÓGICO DR. ROSELL – DEXEUS

Nº Artículos indexados: 38 Factor de Impacto total: 422.637 Factor impacto medio x artículo: 11.122

Aguado C, Teixido C, **Román R**, Reyes R, **Giménez-Capitán A**, Marin E, **Cabrera C**, Viñolas N, Castillo S, Muñoz S, Arcocha A, López-Vilaró L, Sullivan I, **Aldeguer E**, **Rodríguez S**, **Moya I**, **Viteri S**, Cardona AF, Palmero R, Sainz C, Mesa-Guzmán M, Lozano MD, **Aguilar-Hernández A**, **Martínez-Bueno A**, **González-Cao M**, Gonzalvo E, Leenders WPJ, **Rosell R**, Montuenga LM, Prat A, **Molina-Vila MA**, Reguart N.

Multiplex RNA-based detection of clinically relevant MET alterations in advanced non-small cell lung cancer.
Mol Oncol. 2021 Feb;15(2):350-363. doi: 10.1002/1878-0261.12861. Epub 2020 Dec 7.

MET inhibitors have shown activity in non-small-cell lung cancer patients (NSCLC) with MET amplification and exon 14 skipping (MET Δ ex14). However, patient stratification is imperfect, and thus, response rates have varied widely. Here, we studied MET alterations in 474 advanced NSCLC patients by nCounter, an RNA-based technique, together with next-generation sequencing (NGS), fluorescence in situ hybridization (FISH), immunohistochemistry (IHC), and reverse transcriptase polymerase chain reaction (RT-PCR), exploring correlation with clinical benefit. Of the 474 samples analyzed, 422 (89%) yielded valid results by nCounter, which identified 13 patients (3%) with MET Δ ex14 and 15 patients (3.5%) with very-high MET mRNA expression. These two subgroups were mutually exclusive, displayed distinct phenotypes and did not generally coexist with other drivers. For MET Δ ex14, 3/8 (37.5%) samples positive by nCounter tested negative by NGS. Regarding patients with very-high MET mRNA, 92% had MET amplification by FISH and/or NGS. However, FISH failed to identify three patients (30%) with very-high MET RNA expression, among which one received MET tyrosine kinase inhibitor treatment deriving clinical benefit. Our results indicate that quantitative mRNA-based techniques can improve the selection of patients for MET-targeted therapies.

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Factor Impacto: 6.603

Quartil: 1

Categoría: Oncology

Posición: 52/242

Albuquerque C, Manguinhas R, Costa JG, Gil N, **Codony-Servat J**, Castro M, Miranda JP, Fernandes AS, **Rosell R**, Oliveira NG.

A narrative review of the migration and invasion features of non-small cell lung cancer cells upon xenobiotic exposure: insights from in vitro studies.

Transl Lung Cancer Res. 2021 Jun;10(6):2698-2714. doi: 10.21037/tlcr-21-121.

Lung cancer (LC) is the leading cause of cancer deaths worldwide, being non-small lung cancer (NSCLC) subtypes the most prevalent. Since most LC cases are only detected during the last stage of the disease the high mortality rate is strongly associated with metastases. For this reason, the migratory and invasive capacity of these cancer cells as well as the mechanisms involved have long been studied to uncover novel strategies to prevent metastases and improve the patients' prognosis. This narrative review provides an overview of the main in vitro migration and invasion assays employed in NSCLC research. While several methods have been developed, experiments using conventional cell culture models prevailed, specifically the wound-healing and the transwell migration and invasion assays. Moreover, it is provided herewith a summary of the available information concerning chemical contaminants that may promote the migratory/invasive properties of NSCLC cells in vitro, shedding some light on possible LC risk factors. Most of the reported agents with pro-migration/invasion effects derive from cigarette smoking [e.g., Benzo(a)pyrene and cadmium] and air pollution. This review further presents several studies in which different dietary/plant-derived compounds demonstrated to impair migration/invasion processes in NSCLC cells in vitro. These chemicals that have been proposed as anti-migratory consisted mainly of natural bioactive substances, including polyphenols non-flavonoids, flavonoids,

bibenzyls, terpenes, alkaloids, and steroids. Some of these compounds may eventually represent novel therapeutic strategies to be considered in the future to prevent metastasis formation in LC, which highlights the need for additional in vitro methodologies that more closely resemble the in vivo tumor microenvironment and cancer cell interactions. These studies along with adequate in vivo models should be further explored as proof of concept for the most promising compounds.

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Factor Impacto: 6.498

Quartil: 1

Categoría: Oncology; Respiratory System

Posición: Oncology 55/242; Respiratory System 11/64

Botella-Estrada R, Boada-García A, Carrera-Álvarez C, Fernández-Figueras M, **González-Cao M**, Moreno-Ramírez D, Nagore E, Ríos-Buceta L, Rodríguez-Peralto JL, Samaniego-González E, Tejera-Vaquerizo A, Vílchez-Márquez F, Descalzo-Gallego MA, García-Doval I.

Clinical Practice Guideline on Melanoma From the Spanish Academy of Dermatology and Venereology (AEDV).

[Article in English, Spanish]

Actas Dermosifiliogr (Engl Ed). 2021 Feb;112(2):142-152. doi: 10.1016/j.ad.2020.07.003. Epub 2020 Jul 25.

Specialist approaches to the diagnosis and treatment of melanoma have undergone many changes. This guideline aims to provide Spanish dermatologists with evidence-based information for resolving the most common doubts that arise in clinical practice. Members of the Spanish Oncologic Dermatology and Surgery Group (GEDOC) with experience treating melanoma were invited to participate in drafting the guideline. The group developed a new guideline on the basis of existing ones, using the ADAPTE collaboration process, first summarizing the care process and posing relevant clinical questions, then selecting guidelines with the best scores according to the AGREE II (Appraisal of Guidelines for Research and Evaluation) tool. Finally, the group searched the selected guidelines for answers to the clinical questions, drafted recommendations, and sent them for external review. The guideline is structured around 21 clinical questions chosen for their relevance to issues that make clinical decisions about the management of melanoma difficult. Evidence from existing guidelines was used to answer the questions. A limitation of this guide derives from the scarce evidence available for answering some questions. Moreover, some areas are changing rapidly, so recommendations must be updated often. The present guideline offers answers to clinical questions about the routine management of melanoma in clinical practice and provides dermatologists with a reference to guide decisions, taking into consideration the resources available and patient preferences.

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Indexado en: PubMed

Bracht JWP, Gimenez-Capitan A, Huang CY, Potie N, Pedraz-Valdunciel C, Warren S, Rosell R, Molina-Vila MA.

Analysis of extracellular vesicle mRNA derived from plasma using the nCounter platform.

Sci Rep. 2021 Feb 12;11(1):3712. doi: 10.1038/s41598-021-83132-0.

Extracellular vesicles (EVs) are double-layered phospholipid membrane vesicles that are released by most cells and can mediate intercellular communication through their RNA cargo. In this study, we tested if the NanoString nCounter platform can be used for the analysis of EV-mRNA. We developed and optimized a methodology for EV enrichment, EV-RNA extraction and nCounter analysis. Then, we demonstrated the validity of our workflow by analyzing EV-RNA profiles from the plasma of 19 cancer patients and 10 controls and developing a gene signature to differentiate cancer versus control samples. TRI reagent outperformed automated RNA extraction and, although lower plasma input is feasible, 500 µL provided highest total counts and number of transcripts

detected. A 10-cycle pre-amplification followed by DNase treatment yielded reproducible mRNA target detection. However, appropriate probe design to prevent genomic DNA binding is preferred. A gene signature, created using a bioinformatic algorithm, was able to distinguish between control and cancer EV-mRNA profiles with an area under the ROC curve of 0.99. Hence, the nCounter platform can be used to detect mRNA targets and develop gene signatures from plasma-derived EVs.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 4.379

Quartil: 1

Categoría: Multidisciplinary Sciences

Posición: 17/73

Cai X, Miao J, Sun R, Wang S, **Molina-Vila MA**, Chaib I, **Rosell R**, Cao P.

Dihydroartemisinin overcomes the resistance to osimertinib in EGFR-mutant non-small-cell lung cancer.

Pharmacol Res. 2021 Jun 1;170:105701. doi: 10.1016/j.phrs.2021.105701. Online ahead of print.

Osimertinib, a third-generation EGFR tyrosine kinase inhibitor (TKI), is commonly used to treat EGFR-mutant non-small-cell lung cancer (NSCLC). However, acquired resistance to mutant EGFR (T790M) can evolve following osimertinib treatment. High reactive oxygen species (ROS) levels in lung cancer cells can influence heme levels and have an impact on osimertinib resistance. Here, we found that heme levels were increased in osimertinib resistant EGFR-mutant NSCLC cell lines and plasma heme levels were also elevated in osimertinib-treated EGFR-mutant NSCLC patients. The antimalarial drug dihydroartemisinin (DHA), which has anticancer effects and requires heme, was tested to determine its potential to revert osimertinib resistance. DHA downregulated the expression of heme oxygenase 1 and inhibited cell proliferation in osimertinib-resistant EGFR-mutant NSCLC cells (PC9-GR4-AZD1), which was further enhanced by addition of 5-aminolevulinic acid, protoporphyrin IX and hemin. DHA was synergistic with osimertinib in inhibiting cell proliferation and colony formation of all osimertinib-resistant cell lines tested. Combination treatment with osimertinib and DHA also increased the levels of ROS, downregulated the phosphorylation or protein levels of several RTKs that often are overexpressed in osimertinib-resistant EGFR-mutant NSCLC cells, and inhibited tumor growth without toxicity in a PC9-GR4-AZD1 xenograft mouse model. The results suggest that DHA is able to reverse the resistance to osimertinib in EGFR-mutant NSCLC by elevating ROS level and impair heme metabolism.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 7.658

Quartil: 1

Categoría: Pharmacology & Pharmacy

Posición: 16/275

Casarrubios M, Cruz-Bermúdez A, Nadal E, Insa A, Garcia-Campelo R, Lázaro M, Dómine M, Majem M, Rodríguez-Abreu D, Martínez-Martí A, de Castro-Carpeño J, Cobo M, López-Vivanco G, Del Barco E, Bernabé Caro R, Viñolas N, Barneto Aranda I, **Viteri S**, Massuti B, Barquin M, Laza-Briviesca R, Sierra-Rodero B, Parra ER, Sanchez-Espiridion B, Rocha P, Kadara H, Wistuba II, Romero A, Calvo V, Provencio M.

Pre-treatment tissue TCR repertoire evenness is associated with complete pathological response in patients with NSCLC receiving neoadjuvant chemoimmunotherapy.

Clin Cancer Res. 2021 Aug 10;clincanres.1200.2021. doi: 10.1158/1078-0432.CCR-21-1200. Online ahead of print.

PURPOSE: Characterization of the T-cell receptor (TCR) repertoire may be a promising source for predictive biomarkers of pathological response to immunotherapy in locally-advanced non-small cell lung cancer (NSCLC).

EXPERIMENTAL DESIGN: In this study, next-generation TCR sequencing was performed in peripheral blood and tissue samples of 40 NSCLC patients, before and after neoadjuvant chemoimmunotherapy (NADIM clinical trial, NCT03081689), considering their complete pathologic response (CPR) or non-CPR. Beyond TCR metrics, tissue clones were ranked by their frequency and spatiotemporal evolution of top 1% clones was determined.

RESULTS: We have found a positive association between an uneven TCR repertoire in tissue samples at

diagnosis and CPR at surgery. Moreover, TCR most frequent-ranked clones (top 1%) present in diagnostic biopsies occupied greater frequency in the total clonal space of CPR patients, achieving an AUC ROC to identify CPR patients of 0.967 (95% CI, 0.897 to 1.000; p=0.001), and improving the results of PD-L1 TPS (AUC 0.767; p=0.026) or TMB (AUC 0.550; p=0.687). Furthermore, tumors with high pre-treatment top 1% clonal space showed similar immune cell populations but a higher immune reactive gene expression profile. Finally, the selective expansion of pre-treatment tissue top 1% clones in peripheral blood of CPR patients suggests also a peripheral immunosurveillance, which could explain the high survival rate of these patients. **CONCLUSIONS:** We have identified two parameters derived from TCR repertoire analysis that could outperform PD-L1 TPS and TMB as predictive biomarkers of CPR after neoadjuvant chemoimmunotherapy, and unraveled possible mechanisms of CPR involving enhanced tumor immunogenicity and peripheral immunosurveillance.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 12.531

Quartil: 1

Categoría: Oncology

Posición: 18/24

Codony-Servat J, García-Roman S, Molina-Vila MÁ, Bertran-Alamillo J, Viteri S, d'Hondt E, Rosell R.

Anti-epidermal growth factor vaccine antibodies increase the antitumor activity of kinase inhibitors in ALK and RET rearranged lung cancer cells.

Transl Oncol. 2021 Jan;14(1):100887. doi: 10.1016/j.tranon.2020.100887. Epub 2020 Oct 23.

Advanced NSCLC patients harboring EML4-ALK and CCDC6-RET rearrangements derive benefit from treatment with ALK and RET TKIs but not immune checkpoint inhibitors. New immunotherapeutic approaches, such as immunization against growth factors, can be of particular interest for combination treatment in these patients. Here, we investigated the effects of anti-EGF antibodies generated by vaccination (anti-EGF VacAbs), TKIs and combinations in EML4-ALK and CCDC6-RET NSCLC cell lines. We found that EGF and tumor growth factor alpha (TGF α) significantly decreased the antiproliferative activity of the RET inhibitor BLU-667 in CCDC6-RET cells and brigatinib, alectinib and crizotinib in EML4-ALK translocated cells. The addition of anti-EGF VacAbs reversed the effects of EGF and TGF α , potentiated the antitumor effects of the kinase inhibitors and delayed the appearance in vitro of resistant clones. Western blotting demonstrated that the combination of anti-EGF VacAbs with ALK or RET TKIs effectively suppressed EGFR downstream pathways in EML4-ALK translocated and CCDC6-RET cells, respectively. In conclusion, anti-EGF VacAbs significantly increased the antitumor activity of TKIs in ALK and RET-positive cell lines. Clinical trials of an EGF vaccine in combination with ALK and RET TKIs are warranted.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 4.243

Quartil: 2

Categoría: Oncology

Posición: 117/242

Drilon A, Duruisseaux M, Han JY, **Ito M**, Falcon C, Yang SR, Murciano-Goroff YR, Chen H, Okada M, **Molina MA**, Wislez M, Brun P, Dupont C, Branden E, Rossi G, Schrock A, Ali S, Gounant V, Magne F, Blum TG, Schram AM, Monnet I, Shih JY, Sabari J, Pérol M, Zhu VW, Nagasaka M, Doebele R, Camidge DR, Arcila M, Ou SI, Moro-Sibilot D, **Rosell R**, Muscarella LA, Liu SV, Cadranet J.

Clinicopathologic Features and Response to Therapy of NRG1 Fusion-Driven Lung Cancers: The eNRGy1 Global Multicenter Registry.

J Clin Oncol. 2021 Sep 1;39(25):2791-2802. doi: 10.1200/JCO.20.03307. Epub 2021 Jun 2.

PURPOSE: Although NRG1 fusions are oncogenic drivers across multiple tumor types including lung cancers, these are difficult to study because of their rarity. The global eNRGy1 registry was thus established to characterize NRG1 fusion-positive lung cancers in the largest and most diverse series to date. **METHODS:** From June 2018 to February 2020, a consortium of 22 centers from nine countries in Europe, Asia, and the United States contributed data from patients with pathologically confirmed NRG1 fusion-positive lung cancers. Profiling

included DNA-based and/or RNA-based next-generation sequencing and fluorescence in situ hybridization. Anonymized clinical, pathologic, molecular, and response (RECIST v1.1) data were centrally curated and analyzed. **RESULTS:** Although the typified never smoking (57%), mucinous adenocarcinoma (57%), and nonmetastatic (71%) phenotype predominated in 110 patients with NRG1 fusion-positive lung cancer, further diversity, including in smoking history (43%) and histology (43% nonmucinous and 6% nonadenocarcinoma), was elucidated. RNA-based testing identified most fusions (74%). Molecularly, six (of 18) novel 5' partners, 20 unique epidermal growth factor domain-inclusive chimeric events, and heterogeneous 5'/3' breakpoints were found. Platinum-doublet and taxane-based (post-platinum-doublet) chemotherapy achieved low objective response rates (ORRs 13% and 14%, respectively) and modest progression-free survival medians (PFS 5.8 and 4.0 months, respectively). Consistent with a low programmed death ligand-1 expressing (28%) and low tumor mutational burden (median: 0.9 mutations/megabase) immunophenotype, the activity of chemoimmunotherapy and single-agent immunotherapy was poor (ORR 0%/PFS 3.3 months and ORR 20%/PFS 3.6 months, respectively). Afatinib achieved an ORR of 25%, not contingent on fusion type, and a 2.8-month median PFS. **CONCLUSION:** NRG1 fusion-positive lung cancers were molecularly, pathologically, and clinically more heterogeneous than previously recognized. The activity of cytotoxic, immune, and targeted therapies was disappointing. Further research examining NRG1-rearranged tumor biology is needed to develop new therapeutic strategies.

Indexado en: PubMed/WOS/JCR /JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 44.544

Quartil: 1

Categoría: Oncology

Posición: 4/242

García-Alfonso P, Díaz-Rubio E, **Abad A**, Carrato A, Massutí B, Ortiz-Morales MJ, Manzano Mozo JL, Muñoz A, Durán G, Sastre J, Safont MJ, Ferreiro R, Rivera F, González E, Valladares-Ayerbes M, Grávalos C, Alonso-Orduña V, Viéitez JM, Yubero A, Aranda E; Spanish Cooperative Group for the Treatment of Digestive Tumors (TTD).

First-Line Biological Agents Plus Chemotherapy in Older Patients with Metastatic Colorectal Cancer: A Retrospective Pooled Analysis.

Drugs Aging. 2021 Mar;38(3):219-231. doi: 10.1007/s40266-021-00834-w. Epub 2021 Feb 22.

Collaborators: Abad A, Manzano JL, Antón A, Orduña VA, Arrivi A, Falcó E, Carrato A, Longo-Muñoz F, Guillén-Ponce C, López JLG, Gallego J, Lescure AR, Cervantes A, Etxeberría A, La Casta A, López-Ladrón A, Tapiador AMG, Ruiz A, Salud A, Ruiz AS, Provencio M, Velasco A, Viudez A, Arrazubi V, Massutí B, Yuste A, Queralt B, Hernández-Yagüe X, Alonso C, Fernández-Martos C, García-Girón C, Grávalos C, Robles L, Martín C, Albiol S, Pericay C, Almenar D, Aranda E, Gómez A, Barrajon E, Cabrera E, Del Río L, Oltra A, Díaz-Rubio E, Sastre J, García-Paredes B, González E, Conde V, Jiménez E, Marcuello E, Losa F, Rivera F, López-López C, Dorta FJ, Afonso R, Manzano H, Alcaide J, Alfaro J, Cassinello J, García-Foncillas J, Puche JLG, Campos JM, Alberola V, Tabernero JM, Vicent JM, Galán A, Viéitez JM, Remón J, Valadés JLM, Benavides M, Centelles M, Chaves M, Constenla M, Gallén M, Montagut C, Llanos M, Ureña MM, Navalón M, Nogué M, Gay M, Valladares M, Reboredo M, Gómez MJ, Safont MJ, Bueso P, Escudero P, Alfonso PG, García-Tejido P, de Prado PM, Dueñas R, Cárdenas N, Grández R, López RL, Salazar R, Vera R, Viudez A, Merino S, Checa T, García TG, Valentí V, Casado S.

BACKGROUND: Biologicals, in combination with chemotherapy, are recommended as first-line treatment of metastatic colorectal cancer (mCRC); however, evidence guiding the appropriate management of older patients with mCRC is limited. **OBJECTIVE:** This study was undertaken to compare the efficacy and safety outcomes in older versus younger patients with mCRC who received first-line biological therapy. **METHODS:** This retrospective analysis used pooled data from five trials undertaken by the Spanish Cooperative Group for the Treatment of Digestive Tumours. All were studies of adults with advanced CRC who received first-line treatment with chemotherapy plus bevacizumab, cetuximab or panitumumab, stratified by age (≥ 65 vs. < 65 years). Endpoints included progression-free survival (PFS), overall survival (OS), overall response rate (ORR) and safety. **RESULTS:** In total, 999 patients from five studies were included in the analysis: 480 (48%) were aged ≥ 65 years, and 519 (52%) were aged < 65 years. Median PFS did not differ significantly between patients aged ≥ 65 and < 65 years (9.9 vs. 9.4 months; hazard ratio [HR] 1.01; 95% confidence interval [CI] 0.88-1.17). Median OS

was significantly shorter in older than in younger patients (21.3 vs. 25.0 months; HR 1.21; 95% CI 1.04-1.41). There was no significant difference between older and younger patients in ORR (59 vs. 62%). Patients aged \geq 65 years experienced significantly more treatment-related grade 3 or higher adverse events (61.67%) than did patients aged $<$ 65 years (45.86%). **CONCLUSIONS:** Biologicals plus chemotherapy is an effective first-line treatment option for selected patients aged \geq 65 years with mCRC and has a manageable safety profile and efficacy comparable to that observed in younger patients.

Indexado en: PubMed/WOS/JCR /JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 3.923

Quartil: 2

Categoría: Geriatric & Gerontology; Pharmacology & Pharmacy

Posición: Geriatric & Gerontology 24/53; Pharmacology & Pharmacy 113/275

Giménez-Capitán A, Bracht J, García JJ, Jordana-Ariza N, García B, Garzón M, Mayo-de-Las-Casas C, Viteri-Ramírez S, Martínez-Bueno A, Aguilar A, Sullivan IG, Johnson E, Huang CY, Gerlach JL, Warren S, Beechem JM, Teixidó C, Rosell R, Reguart N, Molina-Vila MA.

Multiplex Detection of Clinically Relevant Mutations in Liquid Biopsies of Cancer Patients Using a Hybridization-Based Platform.

Clin Chem. 2021 Mar 1;67(3):554-563. doi: 10.1093/clinchem/hvaa248.

BACKGROUND: With the advent of precision oncology, liquid biopsies are quickly gaining acceptance in the clinical setting. However, in some cases, the amount of DNA isolated is insufficient for Next-Generation Sequencing (NGS) analysis. The nCounter platform could be an alternative, but it has never been explored for detection of clinically relevant alterations in fluids. **METHODS:** Circulating-free DNA (cfDNA) was purified from blood, cerebrospinal fluid, and ascites of patients with cancer and analyzed with the nCounter 3 D Single Nucleotide Variant (SNV) Solid Tumor Panel, which allows for detection of 97 driver mutations in 24 genes. **RESULTS:** Validation experiments revealed that the nCounter SNV panel could detect mutations at allelic fractions of 0.02-2% in samples with \geq 5 pg mutant DNA/ μ L. In a retrospective analysis of 70 cfDNAs from patients with cancer, the panel successfully detected EGFR, KRAS, BRAF, PIK3CA, and NRAS mutations when compared with previous genotyping in the same liquid biopsies and paired tumor tissues [Cohen kappa of 0.96 (CI = 0.92-1.00) and 0.90 (CI = 0.74-1.00), respectively]. In a prospective study including 91 liquid biopsies from patients with different malignancies, 90 yielded valid results with the SNV panel and mutations in EGFR, KRAS, BRAF, PIK3CA, TP53, NFE2L2, CTNNB1, ALK, FBXW7, and PTEN were found. Finally, serial liquid biopsies from a patient with NSCLC revealed that the semiquantitative results of the mutation analysis by the SNV panel correlated with the evolution of the disease. **CONCLUSIONS:** The nCounter platform requires less DNA than NGS and can be employed for routine mutation testing in liquid biopsies of patients with cancer.

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Indexado en: PubMed/WOS/JCR /JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 8.327

Quartil: 1

Categoría: Medical Laboratory Technology

Posición: 1/29

Gonzalez-Cao M, Carrera C, Rodriguez Moreno JF, Rodríguez-Jiménez P, Basa MA, Ochoa RF, Puertolas T, Muñoz-Couselo E, Manzano JL, Marquez-Rodas I, Martín-Liberal J, Soria A, Criado PL, Garcia-Castaño A, Boada A, Ayala de Miguel P, Puig S, Crespo G, Fra PL, Zamora CA, Rodríguez MF, Valles L, Drozdowskyj A, Maldonado-Seral C, Gardeazabal J, Villalobos L, Rosell R, Fernandez-Morales LA, Rodrigo A, Viteri S, Provencio M, Berrocal A; Spanish Melanoma Group (GEM).

COVID-19 in melanoma patients: Results of the Spanish Melanoma Group Registry, GRAVID study.

J Am Acad Dermatol. 2021 May;84(5):1412-1415. doi: 10.1016/j.jaad.2021.02.013. Epub 2021 Feb 10.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 11.527

Quartil: 1

Categoría: Dermatology

Posición: 1/68

Gonzalez-Cao M, Puertolas T, Riveiro M, Muñoz-Couselo E, Ortiz C, Paredes R, Podzamczar D, Manzano JL, Molto J, Revollo B, Carrera C, Mateu L, **Fancelli S**, Espinosa E, Clotet B, Martinez-Picado J, Cerezuela P, Soria A, Marquez I, Mandala M, Berrocal A; Spanish Melanoma Group (GEM).

Cancer immunotherapy in special challenging populations: recommendations of the Advisory Committee of Spanish Melanoma Group (GEM).

J Immunother Cancer. 2021 Mar;9(3):e001664. doi: 10.1136/jitc-2020-001664.

Cancer immunotherapy based on the use of antibodies targeting the so-called checkpoint inhibitors, such as programmed cell death-1 receptor, its ligand, or CTLA-4, has shown durable clinical benefit and survival improvement in melanoma and other tumors. However, there are some special situations that could be a challenge for clinical management. Persons with chronic infections, such as HIV-1 or viral hepatitis, latent tuberculosis, or a history of solid organ transplantation, could be candidates for cancer immunotherapy, but their management requires a multidisciplinary approach. The Spanish Melanoma Group (GEM) panel in collaboration with experts in virology and immunology from different centers in Spain reviewed the literature and developed evidence-based guidelines for cancer immunotherapy management in patients with chronic infections and immunosuppression. These are the first clinical guidelines for cancer immunotherapy treatment in special challenging populations. Cancer immunotherapy in chronically infected or immunosuppressed patients is feasible but needs a multidisciplinary approach in order to decrease the risk of complications related to the coexistent comorbidities.

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Factor Impacto: 13.751

Quartil: 1

Categoría: Oncology; Immunology

Posición: Oncology 15/242; Immunology 8/162

Gonzalez-Cao M, **Mayo de Las Casas C**, Oramas J, Berciano-Guerrero MA, de la Cruz L, Cerezuela P, Arance A, Muñoz-Couselo E, Espinosa E, Puertolas T, Diaz Beveridge R, Ochendusko S, Villanueva MJ, Basterretxea L, Bellido L, Rodriguez D, Campos B, Montagut C, **Drozdowskyj A**, **Molina MA**, Lopez-Martin JA(#), Berrocal A(#).

Intermittent BRAF inhibition in advanced BRAF mutated melanoma results of a phase II randomized trial.

Nat Commun. 2021 Dec 1;12(1):7008. doi: 10.1038/s41467-021-26572-6.

Combination treatment with BRAF (BRAFi) plus MEK inhibitors (MEKi) has demonstrated survival benefit in patients with advanced melanoma harboring activating BRAF mutations. Previous preclinical studies suggested that an intermittent dosing of these drugs could delay the emergence of resistance. Contrary to expectations, the first published phase 2 randomized study comparing continuous versus intermittent schedule of dabrafenib (BRAFi) plus trametinib (MEKi) demonstrated a detrimental effect of the "on-off" schedule. Here we report confirmatory data from the Phase II randomized open-label clinical trial comparing the antitumoral activity of the standard schedule versus an intermittent combination of vemurafenib (BRAFi) plus cobimetinib (MEKi) in advanced BRAF mutant melanoma patients (NCT02583516). The trial did not meet its primary endpoint of progression free survival (PFS) improvement. Our results show that the antitumor activity of the experimental intermittent schedule of vemurafenib plus cobimetinib is not superior to the standard continuous schedule. Detection of BRAF mutation in cell free tumor DNA has prognostic value for survival and its dynamics has an excellent correlation with clinical response, but not with progression. NGS analysis demonstrated de novo mutations in resistant cases.

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Factor Impacto: 14.919

Quartil: 1

Categoría: Multidisciplinary Sciences

Posición: 4/72

Gonzalez-Cao M, Martinez-Picado J, Rosell R.

Safety of Anti-PD-L1 Inhibition in HIV-1-Infected Patients With Cancer-Reply.

JAMA Oncol. 2020 Nov 1;6(11):1810-1811. doi: 10.1001/jamaoncol.2020.3400.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 31.777

Quartil: 1

Categoría: Oncology

Posición: 8/242

Karachaliou N, Arrieta O, Giménez-Capitán A, Aldeguer E, Drozdowskyj A, Chaib I, Reguart N, Garcia-Campelo R, Chen JH, Molina-Vila MA, Rosell R.

BRCA1 Expression and Outcome in Patients With EGFR -Mutant NSCLC Treated With Gefitinib Alone or in Combination With Olaparib

JTO Clin Res Rep. 2021;2(3):100113

Indexado en: PubMed

Kast RE, Halatsch ME, **Rosell R.**

OPALS: A New Osimertinib Adjunctive Treatment of Lung Adenocarcinoma or Glioblastoma Using Five Repurposed Drugs.

Cells. 2021 May 10;10(5):1148. doi: 10.3390/cells10051148.

BACKGROUND: Pharmacological targeting aberrant activation of epidermal growth factor receptor tyrosine kinase signaling is an established approach to treating lung adenocarcinoma. Osimertinib is a tyrosine kinase approved and effective in treating lung adenocarcinomas that have one of several common activating mutations in epidermal growth factor receptor. The emergence of resistance to osimertinib after a year or two is the rule. We developed a five-drug adjuvant regimen designed to increase osimertinib's growth inhibition and thereby delay the development of resistance. Areas of Uncertainty: Although the assembled preclinical data is strong, preclinical data and the following clinical trial results can be discrepant. The safety of OPALS drugs when used individually is excellent. We have no data from humans on their tolerability when used as an ensemble. That there is no data from the individual drugs to suspect problematic interaction does not exclude the possibility.**DATA SOURCES:** All relevant PubMed.org articles on the OPALS drugs and corresponding pathophysiology of lung adenocarcinoma and glioblastoma were reviewed. **Therapeutic Opinion:** The five drugs of OPALS are in wide use in general medicine for non-oncology indications. OPALS uses the anti-protozoal drug pyrimethamine, the antihistamine cyproheptadine, the antibiotic azithromycin, the antihistamine loratadine, and the potassium sparing diuretic spironolactone. We show how these inexpensive and generically available drugs intersect with and inhibit lung adenocarcinoma growth drive. We also review data showing that both OPALS adjuvant drugs and osimertinib have data showing they may be active in suppressing glioblastoma growth.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.600

Quartil: 2

Categoría: Cell Biology

Posición: 53/195

Laza-Briviesca R, Cruz-Bermúdez A, Nadal E, Insa A, García-Campelo MDR, Huidobro G, Dómine M, Majem M, Rodríguez-Abreu D, Martínez-Martí A, De Castro Carpeño J, Cobo M, López Vivanco G, Del Barco E, Bernabé Caro R, Viñolas N, Barneto Aranda I, **Viteri S**, Massuti B, Casarrubios M, Sierra-Rodero B, Tarín C, García-Grande A, Haymaker C, Wistuba II, Romero A, Franco F, Provencio M.

Blood biomarkers associated to complete pathological response on NSCLC patients treated with neoadjuvant chemoimmunotherapy included in NADIM clinical trial.

Clin Transl Med. 2021 Jul;11(7):e491. doi: 10.1002/ctm2.491.

BACKGROUND: Immunotherapy is being tested in early-stage non-small cell lung cancer (NSCLC), and achieving higher rates of complete pathological responses (CPR) as compared to standard of care. Early identification of CPR patients has vital clinical implications. In this study, we focused on basal peripheral immune cells and their treatment-related changes to find biomarkers associated to CPR. **METHODS:** Blood from 29 stage IIIA NSCLC patients participating in the NADIM trial (NCT03081689) was collected at diagnosis and post neoadjuvant treatment. More than 400 parameters of peripheral blood mononuclear cells (PBMCs) phenotype and plasma soluble factors were analyzed. **RESULTS:** Neoadjuvant chemoimmunotherapy altered more than 150 immune parameters. At diagnosis, 11 biomarkers associated to CPR were described, with an area under the ROC curve >0.70 and p-value <.05. CPR patients had significantly higher levels of CD4+ PD-1+ cells, NKG2D, and CD56 expression on T CD56 cells, intensity of CD25 expression on CD4+ CD25hi+ cells and CD69 expression on intermediate monocytes; but lower levels of CD3+ CD56- CTLA-4+ cells, CD14++ CD16+ CTLA-4+ cells, CTLA-4 expression on T CD56 cells and lower levels of b-NGF, NT-3, and VEGF-D in plasma compared to non-CPR. Post treatment, CPR patients had significantly higher levels of CD19 expression on B cells, BCMA, 4-1BB, MCSF, and PARC and lower levels of MPIF-1 and Flt-3L in plasma compared to non-CPR. **CONCLUSIONS:** Patients achieving CPR seem to have a distinctive peripheral blood immune status at diagnosis, even showing different immune response to treatment. These results reinforce the different biology behind CPR and non-CPR responses.

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Factor Impacto: 11.492 **Quartil:** 1 **Categoría:** Oncology; Medicine, Research & Experimental

Posición: Oncology 24/242; Medicine, Research & Experimental 10/140

Majem M, Manzano JL, Marquez-Rodas I, Mujika K, Muñoz-Couselo E, Pérez-Ruiz E, de la Cruz-Merino L, Espinosa E, **Gonzalez-Cao M**, Berrocal A.

SEOM clinical guideline for the management of cutaneous melanoma (2020).

Clin Transl Oncol. 2021 May;23(5):948-960. doi: 10.1007/s12094-020-02539-9. Epub 2021 Mar 2.

Melanoma affects about 6000 patients a year in Spain. A group of medical oncologists from Spanish Society of Medical Oncology (SEOM) and Spanish Multidisciplinary Melanoma Group (GEM) has designed these guidelines to homogenize the management of these patients. The diagnosis must be histological and determination of BRAF status has to be performed in patients with stage \geq III. Stage I-III resectable melanomas will be treated surgically. In patients with stage III melanoma, adjuvant treatment with immunotherapy or targeted therapy is also recommended. Patients with unresectable or metastatic melanoma will receive treatment with immunotherapy or targeted therapy, the optimal sequence of these treatments remains unclear. Brain metastases require a separate consideration, since, in addition to systemic treatment, they may require local treatment. Patients must be followed up closely to receive or change treatment as soon as their previous clinical condition changes, since multiple therapeutic options are available.

Indexado en: PubMed/WOS/JCR /JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 3.405

Quartil: 3

Categoría: Oncology

Posición: 159/242

Majem M, Sullivan I, **Viteri S**, López-Vivanco G, Cobo M, Sánchez JM, García-González J, Garde J, Sampayo M, Martrat G, Malfettone A, Karachaliou N, **Molina-Vila MA**, **Rosell R**.

First-line osimertinib in patients with epidermal growth factor receptor-mutant non-small-cell lung cancer and with a coexisting low allelic fraction of Thr790Met.

Eur J Cancer. 2021 Dec;159:174-181. doi: 10.1016/j.ejca.2021.09.039. Epub 2021 Nov 8.

AIM OF THE STUDY: The AZENT (NCT02841579) study aimed to assess the efficacy and safety of first-line osimertinib in patients with epidermal growth factor receptor(EGFR)mutation-positive advanced non-small-cell lung cancer (NSCLC) and with a coexisting low allelic fraction of Thr790Met. **METHODS:** In this multicentre, single-arm, open-label, phase IIa study, patients with locally advanced or metastatic NSCLC harbouring centrally confirmedEGFR Thr790Met mutation received 80 mg osimertinib daily. The primary end-point was objective response rate (ORR). The secondary end-points included disease control rate (DCR), progression-free survival (PFS), overall survival (OS) and safety. Efficacy was assessed as per Response Evaluation Criteria in Solid Tumours, version 1.1. Blood samples collected at baseline, end of week 2 and disease progression were analysed using next-generation sequencing. As osimertinib was approved as a first-line therapy during the trial, this led to early termination of phase II; thus, analysis is considered exploratory. **RESULTS:** Twenty-two patients were enrolled and received osimertinib. All 22 patients were included in the efficacy and safety analysis. At the data cutoff, 10 (50%) patients remained on treatment. The median duration of follow-up was 24.4 months (interquartile range 12.9 to 26.0). The ORR was 77.3% (17/22 [95% confidence interval {CI} 54.6 to 89.3]). The DCR was 86.4% (19/22, [95% CI 65.1 to 97.1]). The median PFS was 23.1 months (95% CI 14.1 to NE). The median OS was 28.4 months (95% CI 25.6 to NE). **CONCLUSION:** Despite early study termination, osimertinib first-line therapy yields an overall PFS of 23.1 months in EGFR-mutant patients harbouring a coexisting low allelic fraction of EGFR Thr790Met mutation.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 9.162

Quartil: 1

Categoría: Oncology

Posición:33/242

Malapelle U, Pepe F, Pisapia P, Altamari A, Bellevicine C, Brunnström H, Bruno R, Büttner R, Cirnes L, De Andrea CE, de Biase D, Dumur CI, Ericson Lindquist K, Fontanini G, Gautiero E, Gentien D, Hofman P, Hofman V, Iaccarino A, Lozano MD, **Mayo-de-Las-Casas C**, Merkelbach-Bruse S, Pagni F, Roman R, Schmitt FC, Siemanowski J, Roy-Chowdhuri S, Tallini G, Tresserra F, Vander Borgh S, Vielh P, Vigliar E, Vita GAC, Weynand B, **Rosell R**, **Molina Vila MA**, Troncione G.

Reference standards for gene fusion molecular assays on cytological samples: an international validation study.

J Clin Pathol. 2021 Aug 24;jclinpath-2021-207825. doi: 10.1136/jclinpath-2021-207825. Online ahead of print.

AIMS: Gene fusions assays are key for personalised treatments of advanced human cancers. Their implementation on cytological material requires a preliminary validation that may make use of cell line slides mimicking cytological samples. In this international multi-institutional study, gene fusion reference standards were developed and validated.**METHODS:** Cell lines harbouring EML4(13)-ALK(20) and SLC34A2(4)-ROS1(32) gene fusions were adopted to prepare reference standards. Eight laboratories (five adopting amplicon-based and three hybridisation-based platforms) received, at different dilution points two sets of slides (slide A 50.0%, slide B 25.0%, slide C 12.5% and slide D wild type) stained by Papanicolaou (Pap) and May Grunwald Giemsa (MGG). Analysis was carried out on a total of 64 slides.**RESULTS:** Four (50.0%) out of eight laboratories reported results on all slides and dilution points. While 12 (37.5%) out of 32 MGG slides were inadequate, 27 (84.4%) out of 32 Pap slides produced libraries adequate for variant calling. The laboratories using hybridisation-based platforms showed the highest rate of inadequate results (13/24 slides, 54.2%). Conversely, only 10.0% (4/40 slides) of inadequate results were reported by laboratories adopting amplicon-based platforms.**CONCLUSIONS:**

Reference standards in cytological format yield better results when Pap staining and processed by amplicon-based assays. Further investigation is required to optimise these standards for MGG stained cells and for hybridisation-based approaches.

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Indexado en: PubMed/WOS/JCR/ JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 3.411

Quartil: 2

Categoría: Pathology

Posición: 30/77

Martín C, Enrico D, Mas L, Patane AK, Arrieta O, Soria T, Cardona AF, Ruiz-Patiño A, Ruiz R, Rioja P, Lozano S, Zatarain-Barrón ZL, Barrón F, Puparelli C, Tsou F, Corassa MP, Freitas HC, Cordeiro de Lima VC, Rojas L, Ordóñez-Reyes C, Corrales L, Sotelo C, Rodríguez J, Ricaurte L, Ávila J, Archila P, **Rosell R**, Cuello M, Remon J; CLICaP.

Characteristics and outcomes of thymomas in Latin America: Results from over 10 years of experience (CLICaP-LATImus).

Thorac Cancer. 2021 May;12(9):1328-1335. doi: 10.1111/1759-7714.13901. Epub 2021 Mar 17.

BACKGROUND: Thymomas are a group of rare neoplasms of the anterior mediastinum. The objective of this study was to describe the demographics, clinical characteristics and treatment approaches in Latin America. **METHODS:** This was a retrospective multicenter cohort study including patients with histologically proven thymomas diagnosed between 1997 and 2018. Demographics, clinicopathological characteristics and therapeutic outcomes were collected locally and analyzed in a centralized manner. **RESULTS:** A total of 135 patients were included. Median age at diagnosis was 53 years old (19-84), 53.3% (n = 72) of patients were female and 87.4% had an ECOG performance score ranging from 0-1. A total of 47 patients (34.8%) had metastatic disease at diagnosis. Concurrent myasthenia gravis occurred in 21.5% of patients. Surgery was performed in 74 patients (54.8%), comprising 27 (20%) tumorectomies and 47 (34.8%) thymectomies. According to the Masaoka-Koga system, overall survival (OS) at five-years was 73.4%, 63.8% and 51%, at stages I-II, III-IVA and IVB, respectively (p = 0.005). Furthermore, patients with low lactate dehydrogenase (LDH) (≤ 373 IU/L) at baseline and myasthenia gravis concurrence showed significantly better OS (p = 0.001 and p = 0.008, respectively). In multivariate analysis, high LDH levels (HR 2.8 [95% confidence interval [CI]: 1.1-7.8]; p = 0.036) at baseline and not performing a surgical resection (HR 4.1 [95% CI: 1.3-12.7]; p = 0.016) were significantly associated with increased risk of death. **CONCLUSIONS:** Our data provides the largest insight into the clinical characteristics and outcomes of patients with thymomas in Latin America. Survival in patients with thymomas continues to be very favorable, especially when subjected to adequate local control.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 3.500

Quartil: 2

Categoría: Respiratory System; Oncology

Posición: Respiratory System 26/64; Oncology 151/242

Martínez-Pérez E, **Molina-Vila MA**, Marino-Buslje C.

Panels and models for accurate prediction of tumor mutation burden in tumor samples.

NPJ Precis Oncol. 2021 Apr 13;5(1):31. doi: 10.1038/s41698-021-00169-0.

Immune checkpoint blockade (ICB) is becoming standard-of-care in many types of human malignancies, but patient selection is still imperfect. Tumor mutation burden (TMB) is being evaluated as a biomarker for ICB in clinical trials, but most of the sequencing panels used to estimate it are inadequately designed. Here, we present a bioinformatics-based method to select panels and mathematical models for accurate TMB prediction. Our method is based on tumor-specific, forward-step selection of genes, generation of panels using a linear

regression algorithm, and rigorous internal and external validation comparing predicted with experimental TMB. As a result, we propose cancer-specific panels for 14 malignancies which can offer reliable, clinically relevant estimates of TMBs. Our work facilitates a better prediction of TMB that can improve the selection of patients for ICB therapy.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 8.254

Quartil: 1

Categoría: Oncology

Posición: 35/242

Palmero R, Taus A, **Viteri S**, Majem M, Carcereny E, Garde-Noguera J, Felip E, Nadal E, Malfettone A, Sampayo M, Riva F, Nagy RJ, Lanman RB, Faull I, Dix D, Karachaliou N, **Rosell R**.

Biomarker Discovery and Outcomes for Comprehensive Cell-Free Circulating Tumor DNA Versus Standard-of-Care Tissue Testing in Advanced Non-Small-Cell Lung Cancer.

JCO Precis Oncol. 2021 Nov;5:93-102. doi: 10.1200/PO.20.00241.

PURPOSE: Treatment guidelines for advanced non-small-cell lung cancer (aNSCLC) recommend broad molecular profiling for targeted therapy selection. This study prospectively assessed comprehensive next-generation sequencing (NGS) of cell-free circulating tumor DNA (cfDNA) compared with standard-of-care (SOC) tissue-based testing to identify guideline-recommended alterations in aNSCLC. **PATIENTS AND METHODS:** Patients with treatment-naïve aNSCLC were tested using a well-validated NGS cfDNA panel, and results were compared with SOC tissue testing. The primary objective was noninferiority of cfDNA vs. tissue analysis for the detection of two +guideline-recommended biomarkers (EGFR and ALK) and an additional six actionable biomarkers. Secondary analyses included tissue versus cfDNA biomarker discovery, overall response rate (ORR), progression-free survival (PFS) to targeted therapy, and positive predictive value (PPV) of cfDNA. **RESULTS:** The primary objective was met with cfDNA identifying actionable mutations in 46 patients versus 48 by tissue ($P < .05$). In total, 0/186 patients were genotyped for all eight biomarkers with tissue, compared with 90.8% using cfDNA. Targetable alterations or KRAS were identified in 80.7% when cfDNA was used first versus 57.1% when tissue was used first. PPV for cfDNA-detected EGFR was 100.0% (25/25). ORR and PFS in patients receiving targeted therapy based on tissue or cfDNA were similar to those previously reported. **CONCLUSION:** This prospective study confirms a previous report that comprehensive cfDNA testing is noninferior to SOC tissue testing in detecting aNSCLC-recommended biomarkers. Furthermore, cfDNA-based first-line therapy produced outcomes similar to tissue-based testing, demonstrating the clinical utility of comprehensive cfDNA genotyping as the initial genotyping modality in patients with treatment-naïve aNSCLC when tissue is insufficient or when all actionable biomarkers cannot be rapidly assessed.

Indexado en: PubMed

Park K, Chang GC, Curigliano G, Lim WT, Soo RA, **Molina-Vila MA**, Cattani V, Darville H, Gandossi E, Smutna V, Sudey I, **Viteri S**.

Phase I results of S49076 plus gefitinib in patients with EGFR TKI-resistant non-small cell lung cancer harbouring MET/AXL dysregulation.

Lung Cancer. 2021 May;155:127-135. doi: 10.1016/j.lungcan.2021.03.012. Epub 2021 Mar 13.

BACKGROUND: MET and AXL dysregulation is reported as a bypass mechanism driving tumour progression in non-small cell lung cancer (NSCLC) with acquired resistance to epidermal growth factor receptor (EGFR) tyrosine kinase inhibitor (TKI). This non-comparative phase I study investigated the combination of gefitinib with S49076, a MET/AXL inhibitor, in advanced EGFR TKI-resistant NSCLC patients with MET and/or AXL dysregulation. **METHODS:** Patients received S49076 at escalating doses of 500 or 600 mg with a fixed dose of 250 mg gefitinib orally once daily in continuous 28day cycles. MET and AXL dysregulation and EGFR/T790M mutation status were centrally assessed in tumour biopsies at screening. Tumour response was evaluated using Response Evaluation Criteria in Solid Tumors (RECIST). EGFR TKI resistance mechanisms were analysed by next-

generation sequencing. The clonal evolution of tumours was monitored with the analysis of circulating tumour DNA. **RESULTS:** Of 92 pre-screened patients, 22 met the molecular inclusion criteria and 14 were included. The recommended dose was 600 mg daily S49076. Best overall responses were 2 partial responses (1 patient with MET dysregulation only, 1 MET and AXL co-dysregulation) and 8 patients with stable disease. Other potential concomitant mechanisms of resistance to EGFR TKI were identified in more than half of the included patients. **CONCLUSIONS:** S49076 plus gefitinib demonstrated a good tolerability with limited anti-tumour activity. Due to the low number of eligible patients, no tendency in term of activity appeared in any specific molecular subset and the data did not allow for identification of AXL overexpression as an oncogenic driver.

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Factor Impacto: 5.705

Quartil: 1

Categoría: Respiratory System

Posición: Respiratory System 13/64; Oncology 73/242

Park K, Haura EB, Leighl NB, Mitchell P, Shu CA, Girard N, **Viteri S**, Han JY, Kim SW, Lee CK, Sabari JK, Spira AI, Yang TY, Kim DW, Lee KH, Sanborn RE, Trigo J, Goto K, Lee JS, Yang JC, Govindan R, Bauml JM, Garrido P, Krebs MG, Reckamp KL, Xie J, Curtin JC, Haddish-Berhane N, Roshak A, Millington D, Lorenzini P, Thayu M, Knoblauch RE, Cho BC.

Amivantamab in EGFR Exon 20 Insertion-Mutated Non-Small-Cell Lung Cancer Progressing on Platinum Chemotherapy: Initial Results From the CHRYSALIS Phase I Study.

J Clin Oncol. 2021 Oct 20;39(30):3391-3402. doi: 10.1200/JCO.21.00662. Epub 2021 Aug 2.

Comment in

J Clin Oncol. 2021 Oct 20;39(30):3403-3406.

Nat Rev Clin Oncol. 2021 Oct;18(10):604.

PURPOSE: Non-small-cell lung cancer (NSCLC) with epidermal growth factor receptor (EGFR) exon 20 insertion (Exon20ins) mutations exhibits inherent resistance to approved tyrosine kinase inhibitors. Amivantamab, an GFR-MET bispecific antibody with immune cell-directing activity, binds to each receptor's extracellular domain, bypassing resistance at the tyrosine kinase inhibitor binding site. **METHODS:** CHRYSALIS is a phase I, open-label, dose-escalation, and dose-expansion study, which included a population with EGFR Exon20ins NSCLC. The primary end points were dose-limiting toxicity and overall response rate. We report findings from the postplatinum EGFR Exon20ins NSCLC population treated at the recommended phase II dose of 1,050 mg amivantamab (1,400 mg, ≥ 80 kg) given once weekly for the first 4 weeks and then once every 2 weeks starting at week 5. **RESULTS:** In the efficacy population ($n = 81$), the median age was 62 years (range, 42-84 years); 40 patients (49%) were Asian, and the median number of previous lines of therapy was two (range, 1-7). The overall response rate was 40% (95% CI, 29 to 51), including three complete responses, with a median duration of response of 11.1 months (95% CI, 6.9 to not reached). The median progression-free survival was 8.3 months (95% CI, 6.5 to 10.9). In the safety population ($n = 114$), the most common adverse events were rash in 98 patients (86%), infusion-related reactions in 75 (66%), and paronychia in 51 (45%). The most common grade 3-4 adverse events were hypokalemia in six patients (5%) and rash, pulmonary embolism, diarrhea, and neutropenia in four (4%) each. Treatment-related dose reductions and discontinuations were reported in 13% and 4% of patients, respectively. **CONCLUSION:** Amivantamab, via its novel mechanism of action, yielded robust and durable responses with tolerable safety in patients with EGFR Exon20ins mutations after progression on platinum-based chemotherapy.

Indexado en: PubMed/WOS/JCR/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 44.544

Quartil: 1

Categoría: Oncology

Posición: 4/242

Provencio M, Mazarico Gallego JM, Calles A, Antoñanzas M, Pangua C, Mielgo Rubio X, Nadal E, Castro RL, López-Martín A, Del Barco E, Dómine M, Franco F, Diz P, Sandoval C, Girona ES, Sullivan I, Sala MÁ, Ledo GG, Cucurull M, Mosquera J, Martínez M, Chara LE, Arriola E, Herrera BE, Jarabo JR, Álvarez RÁ, Baena J, **Cao MG**. **Lung cancer patients with COVID-19 in Spain: GRAVID study.** *Lung Cancer.* 2021 Jul;157:109-115. doi: 10.1016/j.lungcan.2021.05.014. Epub 2021 May 14.

INTRODUCTION: Patients with cancer may be at increased risk of more severe COVID-19 disease; however, prognostic factors are not yet clearly identified. The GRAVID study aimed to describe clinical characteristics, outcomes, and predictors of poor outcome in patients with lung cancer and COVID-19. **METHODS:** Prospective observational study that included medical records of patients with lung cancer and PCR-confirmed COVID-19 diagnosis across 65 Spanish hospitals. The primary endpoint was all-cause mortality; secondary endpoints were hospitalization and admission to intensive care units (ICU). **RESULTS:** A total of 447 patients with a mean age of 67.1 ± 9.8 years were analysed. The majority were men (74.3 %) and current/former smokers (85.7 %). NSCLC was the most frequent type of cancer (84.5 %), mainly as adenocarcinoma (51.0 %), and stage III metastatic or unresectable disease (79.2 %). Nearly 60 % of patients were receiving anticancer treatment, mostly first-line chemotherapy. Overall, 350 (78.3 %) patients were hospitalized for a mean of 13.4 ± 11.4 days, 9 (2.0 %) were admitted to ICU and 146 (32.7 %) died. Advanced disease and the use of corticosteroids to treat COVID-19 during hospitalization were predictors of mortality. Hospitalized, non-end-of-life stage patients with lymphocytopenia and high LDH had an increased risk of death. Severity of COVID-19 correlated to higher mortality, ICU admission, and mechanical ventilation rates. **CONCLUSIONS:** Mortality rate was higher among patients treated with corticosteroids during hospitalization, while anticancer therapy was not associated with an increased risk of hospitalization or death. Tailored approaches are warranted to ensure effective cancer management while minimizing the risk of exposure to SARS-CoV-2.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 5.705

Quartil: 1

Categoria: Respiratory System

Posición: Respiratory System 13/64; Oncology 73/242

Provencio M, Serna-Blasco R, Franco F, Calvo V, Royuela A, Auglytè M, Sánchez-Hernández A, de Julián Campayo M, García-Girón C, Dómine M, Blasco A, Sánchez JM, Oramas J, Bosch-Barrera J, Sala MÁ, Sereno M, Ortega AL, Chara L, Hernández B, Padilla A, Coves J, Blanco R, Balsalobre J, Mielgo X, Bueno C, Jantus-Lewintre E, **Molina-Vila MÁ**, Romero A.

Analysis of circulating tumour DNA to identify patients with epidermal growth factor receptor-positive non-small cell lung cancer who might benefit from sequential tyrosine kinase inhibitor treatment.

Eur J Cancer. 2021 May;149: 61-72. doi: 10.1016/j.ejca.2021.02.031. Epub 2021 Apr 5.

BACKGROUND: Survival data support the use of first-line osimertinib as the standard of care for epidermal growth factor receptor (EGFR)-positive non-small cell lung cancer (NSCLC). However, it remains unclear whether upfront osimertinib is superior to sequential first- or second-generation tyrosine kinase inhibitors (TKIs) followed by osimertinib for all patients. It is impossible to predict which patients are at high risk of progression, and this constitutes a major limitation of the sequential TKI approach. **PATIENTS AND METHODS:** A total of 830 plasma samples from 228 patients with stage IV, EGFR-positive NSCLC who were treated with first-line TKIs were analysed by digital polymerase chain reaction (dPCR). **RESULTS:** The circulating tumour DNA (ctDNA) levels helped to identify patients with significantly improved survival rate, regardless of the treatment. Patients treated with first- or second-generation TKIs (N = 189) with EGFR mutations in plasma at a mutant allele frequency (MAF) <7% before treatment initiation (low-risk patients) or who were ctDNA negative after 3 or 6 months of treatment and with an MAF <7% at diagnosis (high responders) had two-thirds lower risk of death than patients in the opposite situation (adjusted hazard ratio [HR] = 0.38; 95% confidence interval [CI]: 0.23-0.64

and HR = 0.22; 95% CI: 0.12-0.42, respectively). The median overall survival (OS) for low-risk patients and high responders treated with first- or second-generation TKIs was 34.2 months and not reached, respectively, regardless of second-line treatment. There were no significant difference in OS between low-risk or high-responder patients treated upfront with osimertinib (N = 39) and those treated under a sequential approach with osimertinib (N = 60). Median OS was not reached in both cases. **CONCLUSIONS:** Pre-treatment ctDNA levels identify low-risk patients, who may benefit from sequential TKI treatment. Information regarding EGFR mutation clearance can help to improve patient selection.

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Factor Impacto: 9.162

Quartil: 1

Categoría: Oncology

Posición:33/242

Rico LG, **Aguilar Hernández A**, Ward MD, Bradford JA, Juncà J, **Rosell R**, Petriz J.

Unmasking the expression of PD-L1 in Myeloid Derived Suppressor Cells: A case study in lung cancer to discover new drugs with specific on-target efficacy.

Transl Oncol. 2021 Jan;14(1):100969. doi: 10.1016/j.tranon.2020.100969. Epub 2020 Dec 7.

- PD-L1 displays variation of spatial conformation in response to phorbol ester stimulation, which may confer a critical enhancement in binding affinity.
- PD-L1 conformational change may be associated with an immunoregulatory mechanism that affects therapies targeting the PD-1/PD-L1 checkpoint.
- Eliminating MDSCs by promoting PD-L1 stabilized unfolded states on both PMN- and M-MDSCs could improve immunotherapy efficacy.
- In view of these conformational properties, analysis of accumulation, expansion and survival of pathological immunosuppressive MDSCs could help to better understand and overcome the mechanisms of immunotherapy resistance, by developing new treatment strategies aimed at promoting PD-L1 stabilized unfolded states.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 4.243

Quartil: 2

Categoría: Oncology

Posición:117/242

Rodríguez-Abreu D, Cobo M, García-Román S, Viteri-Ramírez S, Jordana-Ariza NO, García-Peláez B, Reguart N, Aguilar A, Codony-Servat J, Drozdowskyj A, Molina-Vila MA, d'Hondt E, Rosell R.

The EPICAL trial, a phase 1b study combining first line afatinib with anti-EGF vaccination in EGFR-mutant metastatic NSCLC.

Lung Cancer. 2021 Dec 23;164:8-13. doi: 10.1016/j.lungcan.2021.12.014. Online ahead of print.

INTRODUCTION: Combination of anti-EGFR monoclonal antibodies or immune checkpoint inhibitors with TKIs has shown minimal benefit in EGFR mutant (EGFR-mut) NSCLC patients. Consequently, new combination approaches are needed. **PATIENTS AND METHODS:** The EPICAL was a single arm, phase 1b study to evaluate safety, tolerability and anti-tumor activity of first line afatinib combined with anti-EGF vaccination in advanced EGFR-mut patients. EGFR status and mutations in liquid biopsies were determined by reverse transcriptase-polymerase chain reaction; serum biomarkers by ELISA and Western blotting analysis. **RESULTS:** The assay enrolled 23 patients, 21 completed the anti-EGF immunization phase. Treatment was well tolerated and no serious adverse events (SAEs) related to the anti-EGF vaccine were reported. Objective response and disease control rates were 78.3% (95%CI = 53.6-92.5) and 95.7% (95%CI = 78.1-99.9), respectively. After a median follow-up of 24.2 months, median progression-free survival (PFS) was 14.8 months (95% CI = 9.5-20.1) and median overall survival (OS) 26.9 months (95% CI = 23.0-30.8). Among the 21 patients completing the immunization phase, PFS was 17.5 months (95% CI = 12.0-23.0) and OS 26.9 months (95% CI = 24.6-NR). At the end of the immunization phase, all 21 patients showed high serum titers of anti-EGF antibodies, while EGF levels

had decreased significantly. Finally, treatment with fully immunized patient's sera inhibited the EGFR pathway in tumor cells growing in vitro. **CONCLUSIONS:** Combination treatment with an anti-EGF vaccine is well tolerated; induces a sustained immunogenic effect and might enhance the clinical efficacy of EGFR TKIs.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 5.705 **Quartil:** 1 **Categoría:** Respiratory System; Oncology

Posición: Respiratory System 13/64; Oncology 73/242

Romero A, Jantus-Lewintre E, **García-Peláez B**, Royuela A, Insa A(8), Cruz P(9), Collazo A, Pérez Altozano J, Vidal OJ, Diz P, Cobo M, Hernández B, Vázquez Estevez S, Benítez G, Guirado M, Majem M, Bernabé R, Ortega AL, Blasco A, Bosch-Barrera J, Jurado JM, García González J, **Viteri S**, Garcia Giron C, Massutí B, Lopez Martín A, Rodriguez-Festa A, Calabuig-Fariñas S, **Molina-Vila MÁ**, Provencio M.

Comprehensive cross-platform comparison of methods for non-invasive EGFR mutation testing: results of the RING observational trial.

Mol Oncol. 2021 Jan;15(1):43-56. doi: 10.1002/1878-0261.12832. Epub 2020 Nov 13.

Several platforms for noninvasive EGFR testing are currently used in the clinical setting with sensitivities ranging from 30% to 100%. Prospective studies evaluating agreement and sources for discordant results remain lacking. Herein, seven methodologies including two next-generation sequencing (NGS)-based methods, three high-sensitivity PCR-based platforms, and two FDA-approved methods were compared using 72 plasma samples, from EGFR-mutant non-small-cell lung cancer (NSCLC) patients progressing on a first-line tyrosine kinase inhibitor (TKI). NGS platforms as well as high-sensitivity PCR-based methodologies showed excellent agreement for EGFR-sensitizing mutations ($K = 0.80-0.89$) and substantial agreement for T790M testing ($K = 0.77$ and 0.68 , respectively). Mutant allele frequencies (MAFs) obtained by different quantitative methods showed an excellent reproducibility (intraclass correlation coefficients $0.86-0.98$). Among other technical factors, discordant calls mostly occurred at mutant allele frequencies (MAFs) $\leq 0.5\%$. Agreement significantly improved when discarding samples with $MAF \leq 0.5\%$. EGFR mutations were detected at significantly lower MAFs in patients with brain metastases, suggesting that these patients risk for a false-positive result. Our results support the use of liquid biopsies for noninvasive EGFR testing and highlight the need to systematically report MAFs.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.603 **Quartil:** 1 **Categoría:** Oncology **Posición:**52/242

Rosell R, Gonzalez-Cao M.

Cemiplimab monotherapy in advanced non-squamous and squamous non-small cell lung cancer.

Lancet. 2021 Feb 13;397(10274):557-559. doi: 10.1016/S0140-6736(21)00196-3.

Comment on

Lancet. 2021 Feb 13;397(10274):592-604.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 79.321 **Quartil:** 1 **Categoría:** Medicine, General & Internal **Posición:** 2/169

Rosell R, Cardona AF, Arrieta O, Aguilar A, Ito M, Pedraz C, **Codony-Servat J, Santarpia M.**

Coregulation of pathways in lung cancer patients with EGFR mutation: therapeutic opportunities.

Br J Cancer. 2021 Dec;125(12):1602-1611. doi: 10.1038/s41416-021-01519-2.

Epidermal growth factor receptor (EGFR) mutations in lung adenocarcinoma are a frequent class of driver mutations. Single EGFR tyrosine kinase inhibitor (TKI) provides substantial clinical benefit, but almost nil radiographic complete responses. Patients invariably progress, although survival can reach several years with post-treatment therapies, including EGFR TKIs, chemotherapy or other procedures. Endeavours have been clinically oriented to manage the acquisition of EGFR TKI-resistant mutations; however, basic principles on cancer evolution have not been considered in clinical trials. For years, evidence has displayed rapidly adaptive mechanisms of resistance to selective monotherapy, posing several dilemmas for the practitioner. Strict adherence to non-small cell lung cancer (NSCLC) guidelines is not always practical for addressing the clinical progression that EGFR-mutant lung adenocarcinoma patients suffer. The purpose of this review is to highlight regulatory mechanisms and signalling pathways that cause therapy-induced resistance to EGFR TKIs. It suggests combinatorial therapies that target EGFR, as well as potential mechanisms underlying EGFR-mutant NSCLC, alerting the reader to clinical opportunities that may lead to a deeper and more durable response. Molecular reprogramming contributes to EGFR TKI resistance, and the compiled information is relevant in understanding the development of new combined targeted strategies in EGFR-mutant NSCLC.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 7.640

Quartil: 1

Categoria: Oncology

Posición: 39/242

Sánchez-Prieto M, Fargas F, Tresserra F, **González-Cao M**, Baulies S, Fábregas R.

Surgical Management of Vulvar Melanoma: A Case Series.

Case Rep Oncol. 2021 Jul 20;14(2):1144-1151. doi: 10.1159/000517820. eCollection 2021 May-Aug.

Vulvar malignant melanoma is the second most common subtype of vulvar cancer, accounting for 5-10% of all vulvar cancers. The prognosis is still very poor, although some advances have been achieved in the last years. One of the most significant changes in its management has been the development of less invasive surgical techniques that diminish the risk of postoperative morbidity and long-lasting sequelae. In this article, we review the surgical management of the pathology, based on the comment of 3 cases with vulvar melanoma treated at our institution.

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Indexado en: PubMed/WOS/JCR/ JCI/ JCI/Emerging sources Citation Index (ESCI)

Journal Citation Index: 0.20

Quartil: 4

Categoria: Oncology

Posición: 271/309

Santarpia M, Massafra M, Gebbia V, D'Aquino A, Garipoli C, Altavilla G, **Rosell R**.

A narrative review of MET inhibitors in non-small cell lung cancer with MET exon 14 skipping mutations.

Transl Lung Cancer Res. 2021 Mar;10(3):1536-1556. doi: 10.21037/tlcr-20-1113.

Treatment of advanced non-small cell lung cancer (NSCLC) has radically improved in the last years due to development and clinical approval of highly effective agents including immune checkpoint inhibitors (ICIs) and oncogene-directed therapies. Molecular profiling of lung cancer samples for activated oncogenes, including epidermal growth factor receptor (EGFR), anaplastic lymphoma kinase (ALK), c-ros oncogene 1 (ROS1) and BRAF, is routinely performed to select the most appropriate up-front treatment. However, the identification of new therapeutic targets remains a high priority. Recently, MET exon 14 skipping mutations have emerged as novel actionable oncogenic alterations in NSCLC, sensitive to MET inhibition. In this review we discuss: (I) MET gene and MET receptor structure and signaling pathway; (II) MET exon 14 alterations; (III) current data on MET inhibitors, mainly focusing on selective MET tyrosine kinase inhibitors (TKIs), in the treatment of NSCLC with MET exon 14 skipping mutations. We identified the references for this review through a literature search of

papers about MET, MET exon 14 skipping mutations, and MET inhibitors, published up to September 2020, by using PubMed, Scopus and Web of Science databases. We also searched on websites of main international cancer congresses (ASCO, ESMO, IASLC) for ongoing studies presented as abstracts. MET exon 14 skipping mutations have been associated with clinical activity of selective MET inhibitors, including capmatinib, that has recently received approval by FDA for clinical use in this subgroup of NSCLC patients. A large number of trials are testing MET inhibitors, also in combinatorial therapeutic strategies, in MET exon 14-altered NSCLC. Results from these trials are eagerly awaited to definitively establish the role and setting for use of these agents in NSCLC patients.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.498

Quartil: 1

Categoría: Respiratory System; Oncology

Posición: Respiratory System 11/64; Oncology 55/242

Serna-Blasco R, Sánchez-Herrero E, Berrocal Renedo M, Calabuig-Fariñas S, **Molina-Vila MÁ**, Provencio M, Romero A.

R-Score: A New Parameter to Assess the Quality of Variants' Calls Assessed by NGS Using Liquid Biopsies. Biology (Basel). 2021 Sep 24;10(10):954. doi: 10.3390/biology10100954.

Next-generation sequencing (NGS) has enabled a deeper knowledge of the molecular landscape in non-small cell lung cancer (NSCLC), identifying a growing number of targetable molecular alterations in key genes. However, NGS profiling of liquid biopsies risk for false positive and false negative calls and parameters assessing the quality of NGS calls remains lacking. In this study, we have evaluated the positive percent agreement (PPA) between NGS and digital PCR calls when assessing EGFR mutation status using 85 plasma samples from 82 EGFR-positive NSCLC patients. According to our data, variant allele fraction (VAF) was significantly lower in discordant calls and the median of the absolute values of all pairwise differences (MAPD) was significantly higher in discordant calls ($p < 0.001$ in both cases). Based on these results, we propose a new parameter that integrates both variables, named R-score. Next, we sought to evaluate the PPA for EGFR mutation calls between two independent NGS platforms using a subset of 40 samples from the same cohort. Remarkably, there was a significant linear correlation between the PPA and the R-score ($r = 0.97$; $p < 0.001$). Specifically, the PPA of samples with an R-score ≤ -1.25 was 95.83%, whereas PPA falls to 81.63% in samples with R-score ≤ 0.25 . In conclusion, R-score significantly correlates with PPA and can assist laboratory medicine specialists and data scientists to select reliable variants detected by NGS.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 5.079

Quartil: 1

Categoría: Biology

Posición: 16/93

Sierra-Rodero B, Cruz-Bermúdez A, Nadal E, Garitaonandía Y, Insa A, Mosquera J, Casal-Rubio J, Dómine M, Majem M, Rodríguez-Abreu D, Martínez-Martí A, De Castro Carpeño J, Cobo M, López Vivanco G, Del Barco E, Bernabé Caro R, Viñolas N, Barneto Aranda I, **Viteri S**, Massuti B, Laza-Briviesca R, Casarrubios M, García-Grande A, Romero A, Franco F, Provencio M.

Clinical and molecular parameters associated to pneumonitis development in non-small-cell lung cancer patients receiving chemoimmunotherapy from NADIM trial.

J Immunother Cancer. 2021 Aug;9(8):e002804. doi: 10.1136/jitc-2021-002804.

BACKGROUND: Pneumonitis (Pn) is one of the main immune-related adverse effects, having a special importance in lung cancer, since they share affected tissue. Despite its clinical relevance, Pn development remains an unpredictable treatment adverse effect, whose mechanisms are mainly unknown, being even more

obscure when it is associated to chemoimmunotherapy. **METHODS:** In order to identify parameters associated to treatment related Pn, we analyzed clinical variables and molecular parameters from 46 patients with potentially resectable stage IIIA non-small-cell lung cancer treated with neoadjuvant chemoimmunotherapy included in the NADIM clinical trial (NCT03081689). Pn was defined as clinical or radiographic evidence of lung inflammation without alternative diagnoses, from treatment initiation to 180 days. **RESULTS:** Among 46 patients, 12 developed Pn (26.1%). Sex, age, smoking status, packs-year, histological subtype, clinical or pathological response, progression-free survival, overall survival and number of nivolumab cycles, were not associated to Pn development. Regarding molecular parameters at diagnosis, Pn development was not associated to programmed death ligand 1, TPS, T cell receptor repertoire parameters, or tumor mutational burden. However, patients who developed Pn had statistically significant lower blood median levels of platelet to monocyte ratio ($p=0.012$) and teratocarcinoma-derived growth factor 1 ($p=0.013$; area under the curve (AUC) 0.801), but higher median percentages of natural killers (NKs) ($p=0.019$; AUC 0.786), monocytes ($p=0.017$; AUC 0.791), MSP ($p=0.006$; AUC 0.838), PARN ($p=0.017$; AUC 0.790), and E-Cadherin ($p=0.022$; AUC 0.788). In addition, the immune scenario of Pn after neoadjuvant treatment involves: high levels of neutrophils and NK cells, but low levels of B and T cells in peripheral blood; increased clonality of intratumoral T cells; and elevated plasma levels of several growth factors (EGF, HGF, VEGF, ANG-1, PDGF, NGF, and NT4) and inflammatory cytokines (MIF, CCL16, neutrophil gelatinase-associated lipocalin, BMP-4, and u-PAR). **CONCLUSIONS:** Although statistically underpowered, our results shed light on the possible mechanisms behind Pn development, involving innate and adaptative immunity, and open the possibility to predict patients at high risk. If confirmed, this may allow the personalization of both, the surveillance strategy and the therapeutic approaches to manage Pn in patients receiving chemoimmunotherapy.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 13.751 **Quartil:** 1 **Categoría:** Immunology; Oncology

Posición: Immunology 8/162; Oncology 15/242

Terp MG, Jacobsen K, **Molina MA**, Karachaliou N, Beck HC, **Bertran-Alamillo J**, **Giménez-Capitán A**, Cardona AF, **Rosell R**, Ditzel HJ.

Combined FGFR and Akt pathway inhibition abrogates growth of FGFR1 overexpressing EGFR-TKI-resistant NSCLC cells.

NPJ Precis Oncol. 2021 Jul 15;5(1):65. doi: 10.1038/s41698-021-00208-w.

EGFR tyrosine kinase inhibitor (TKI) resistance in non-small cell lung cancer (NSCLC) patients is inevitable. Identification of resistance mechanisms and corresponding targeting strategies can lead to more successful later-line treatment in many patients. Using spectrometry-based proteomics, we identified increased fibroblast growth factor receptor 1 (FGFR1) expression and Akt activation across erlotinib, gefitinib, and osimertinib EGFR-TKI-resistant cell line models. We show that while combined EGFR-TKI and FGFR inhibition showed some efficacy, simultaneous inhibition of FGFR and Akt or PI3K induced superior synergistic growth inhibition of FGFR1-overexpressing EGFR-TKI-resistant NSCLC cells. This effect was confirmed in vivo. Only dual FGFR and Akt inhibition completely blocked the resistance-mediating signaling pathways downstream of Akt. Further, increased FGFR1 expression was associated with significantly lower PFS in EGFR-TKI-treated NSCLC patients, and increased FGFR1 were demonstrated in a few post- vs. pre-EGFR-TKI treatment clinical biopsies. The superior therapeutic benefit of combining FGFR and Akt inhibitors provide the rationale for clinical trials of this strategy.

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Factor Impacto: 8.254

Quartil: 1

Categoría: Oncology

Posición: 35/242

Ueda D, **Ito M**, Tsutani Y, **Giménez-Capitán A**, **Román-Lladó R**, **Pérez-Rosado A**, **Aguado C**, Kushitani K, Miyata Y, Arihiro K, **Molina-Vila MA**, **Rosell R**, Takeshima Y, Okada M.

Comprehensive analysis of the clinicopathological features, targetable profile, and prognosis of mucinous adenocarcinoma of the lung. *J Cancer Res Clin Oncol.* 2021 Dec;147(12):3709-3718. doi: 10.1007/s00432-021-03609-3. Epub 2021 Apr 1.

PURPOSE: The clinicopathological or genetic features related to the prognosis of mucinous adenocarcinoma are unknown because of its rarity. The clinicopathological or targetable features were investigated for better management of patients with mucinous adenocarcinoma of the lung. **METHODS:** We comprehensively evaluated the clinicopathological and genetic features of 60 completely resected mucinous lung adenocarcinomas. Targetable genetic variants were explored using nCounter and polymerase chain reaction, PD-L1 and TTF-1 expression were evaluated using immunohistochemistry. We analyzed the prognostic impact using the Kaplan-Meier method and log-rank test. **RESULTS:** Of the 60 enrolled patients, 13 (21.7%) had adenocarcinoma in situ/minimally invasive adenocarcinoma, and 47 (78.3%) had invasive mucinous adenocarcinoma (IMA). Fifteen patients (25%) showed a pneumonic appearance on computed tomography (CT). CD74-NRG1 fusion, EGFR mutations, and BRAF mutation were detected in three (5%), four (6.7%), and one (1.7%) patient(s), respectively. KRAS mutations were detected in 31 patients (51.7%). Two patients (3.5%) showed immunoreactivity for PD-L1. No in situ or minimally invasive cases recurred. IMA patients with pneumonic appearance had significantly worse recurrence-free survival (RFS) and overall survival (OS) ($p < 0.001$). Furthermore, IMA patients harboring KRAS mutations had worse RFS ($p = 0.211$). Multivariate analysis revealed that radiological pneumonic appearance was significantly associated with lower RFS ($p < 0.003$) and OS ($p = 0.012$). KRAS mutations served as an unfavorable status for RFS ($p = 0.043$). **CONCLUSION:** Mucinous adenocarcinoma had a low frequency of targetable genetic variants and PD-L1 immunoreactivity; however, KRAS mutations were frequent. Pneumonic appearance on CT imaging and KRAS mutations were clinicopathological features associated with a worse prognosis.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 4.553

Quartil: 2

Categoría: Oncology

Posición: 102/242

MEDICINA INTERNA Y FAMILIAR

Nº Artículos indexados: 2

Factor de Impacto total: S/IF

Factor impacto medio x artículo: 0

Campillo-Recio D, Comas-Aguilar M, Barrera-Ochoa S, Caceres-Palou E, Charte A, Mir-Bullo X.

Accidents and injuries in elite MotoGP motorcycle riders.

J Clin Orthop Trauma. 2021 Apr 14;18:25-29. doi: 10.1016/j.jcot.2021.04.006. eCollection 2021 Jul.

OBJECTIVE: Evaluating incidence, characteristics and risk factors of accidents and injuries in each elite motorcycle racing class (MotoGP, Moto2 and Moto3), 2013-2017. **DESIGN:** Descriptive epidemiological study. **SETTING:** MotoGP Medical Team, Dorna Sports SL. **PARTICIPANTS:** Competing riders in elite motorcycling racing classes, 2013-2017. **INTERVENTIONS:** Benchmarking incidence, characteristics and risk factors of accidents and injuries in each elite motorcycle racing class, 2013-2017. **MAIN OUTCOME MEASURES:** Association between accident type (by class and year) and fracture, withdrawal from race, need for surgery, injuries (fractures or contusions/wounds) and time riders kept inactive. Circuit and curve, weather conditions, presence and type of fracture, clinical outcome, and time until return to competition. Event outcomes were defined as rider fit/rider unfit after each accident. Racing class, track curves and circuits with the most and fewest accidents, circuit characteristics, speed and deceleration, G-forces, and time race differences between classes. **RESULTS:** 9092 accidents (mean 1818,4 per year). Most during race and under wet-weather conditions. Class and circuit with most accidents 2013-2017 were Moto3 (3374; 37.11%) and MWC - Marco Simoncelli -with 430.119/9092 accidents resulted in a fracture (1.31%), 83, surgical fractures (70%). Most frequent surgical fractures were upper extremity (clavicular; 29/119; 21%). On average, riders returned to competition after two circuits (1-5 weeks). **CONCLUSIONS:** Accidents are not uncommon among elite motorcycle riders; incidences of fractures and surgical fractures are low. Factors such as weather conditions and circuit's characteristics influence the risk of accidents. Further research is necessary to clarify the magnitude of the role each of these factors play.

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Indexado en: PubMed

Franco Vanegas J, Esteban I Fernández M, Robert Olalla J.

Presentación inusual de la enfermedad relacionada con el IgG4 [Article in English, Spanish]

Reumatol Clin (Engl Ed). 2021 Apr;17(4):239-240. doi: 10.1016/j.reuma.2020.07.006. Epub 2020 Oct 21.

Indexado en: PubMed

MEDICINA NUCLEAR

Nº Artículos indexados: 1

Factor de Impacto total: 12.531

Factor impacto medio x artículo: 12.531

Rivas-Delgado A, Nadeu F, Enjuanes A, Casanueva-Eliceiry S(5), Mozas P, Magnano L, Castrejón de Anta N, Rovira J, Dlouhy I, Martín S, Osuna M, Rodríguez S, **Simó M**, Pinyol M, Baumann T, Beà S, Balagué O, Delgado J, Villamor N, Setoain X, Campo E, Giné E, López-Guillermo A.

Mutational Landscape and Tumor Burden Assessed by Cell-free DNA in Diffuse Large B-Cell Lymphoma in a Population-Based Study.

Clin Cancer Res. 2021 Jan 15;27(2):513-521. doi: 10.1158/1078-0432.CCR-20-2558. Epub 2020 Oct 29.

PURPOSE: We analyzed the utility of cell-free DNA (cfDNA) in a prospective population-based cohort to determine the mutational profile, assess tumor burden, and estimate its impact in response rate and outcome in patients with diffuse large B-cell lymphoma (DLBCL). **EXPERIMENTAL DESIGN:** A total of 100 patients were diagnosed with DLBCL during the study period. Mutational status of 112 genes was studied in cfDNA by targeted next-generation sequencing. Paired formalin-fixed, paraffin-embedded samples and volumetric PET/CT were assessed when available. **RESULTS:** Appropriate cfDNA to perform the analyses was obtained in 79 of 100 cases. At least one mutation could be detected in 69 of 79 cases (87%). The sensitivity of cfDNA to detect the mutations was 68% (95% confidence interval, 56.2-78.7). The mutational landscape found in cfDNA samples was highly consistent with that shown in the tissue and allowed genetic classification in 43% of the cases. A higher amount of circulating tumor DNA (ctDNA) significantly correlated with clinical parameters related to tumor burden (elevated lactate dehydrogenase and β 2-microglobulin serum levels, advanced stage, and high-risk International Prognostic Index) and total metabolic tumor volume assessed by PET/CT. In patients treated with curative intent, high ctDNA levels (>2.5 log hGE/mL) were associated with lower complete response (65% vs. 96%; $P < 0.004$), shorter progression-free survival (65% vs. 85%; $P = 0.038$), and overall survival (73% vs. 100%; $P = 0.007$) at 2 years, although it did not maintain prognostic value in multivariate analyses. **CONCLUSIONS:** In a population-based prospective DLBCL series, cfDNA resulted as an alternative source to estimate tumor burden and to determine the tumor mutational profile and genetic classification, which have prognostic implications and may contribute to a future tailored treatment.

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Factor Impacto: 12.531

Quartil: 1

Categoría: Oncology

Posición: 18/24

NEUROCIRUGÍA

Nº Artículos indexados: 1

Factor de Impacto total: N/A

Factor impacto medio x artículo: N/A

De Martino L, [Tresserras-Giné G](#), Quaglietta L, Spennato P, Errico M, Bifano D, Cinalli G.

Giant intracranial infantile myofibromatosis of the skull base: report of two cases.

Childs Nerv Syst. 2021 Jul 9. doi: 10.1007/s00381-021-05271-z. Online ahead of print.

Infantile myofibromatosis is a rare and nonmalignant pediatric tumor of myofibroblastic origin that may occur in solitary or multifocal forms. Soft tissue of the head and neck, trunk, and extremities, skeleton, and viscera are usually involved. Intracranial involvement is reported to be extremely rare, and its clinical picture has been poorly characterized. We present two cases of giant infantile myofibromatosis of the skull base with intracranial involvement. The first case with prenatal diagnosis involved extensively the extradural space of the occipital region and was previously treated by chemotherapy for a previous diagnosis of hemangiopericytoma. Tumor was removed at the age of 5 months and no recurrence was observed during the 3-year follow-up. The second case in a 2-year-old baby involved the anterior cranial base, the nasal cavity, the right orbit, and presented massive involvement of the anterior cranial fossa. Surgery allowed complete removal and a recurrence-free period of 7 years after surgery. Treatment options for these unusual cases are presented and details of histological diagnosis are discussed.

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Indexado en: PubMed

NUEUROLOGÍA

Nº Artículos indexados: 2

Factor de Impacto total: 10.985

Factor impacto medio x artículo: 5.492

Belvís R, Irimia P, Pozo-Rosich P, González-Oria C, Cano A, Viguera J, Sánchez B, Molina F, Beltrán I, Oterino A, Cuadrado E, Gómez-Camello A, Alberte-Woodward M, Jurado C, Oms T, Ezpeleta D, de Terán JD, **Morollón N**, Latorre G, Torres-Ferrús M, Alpuente A, Lamas R, Toledano C, Leira R, Santos S, Del Río MS.

MAB-MIG: registry of the spanish neurological society of erenumab for migraine prevention.

J Headache Pain. 2021 Jul 17;22(1):74. doi: 10.1186/s10194-021-01267-x.

BACKGROUND: Erenumab was approved in Europe for migraine prevention in patients with ≥ 4 monthly migraine days (MMDs). In Spain, Novartis started a personalized managed access program, which allowed free access to erenumab before official reimbursement. The Spanish Neurological Society started a prospective registry to evaluate real-world effectiveness and tolerability, and all Spanish headache experts were invited to participate. We present their first results. **METHODS:** Patients fulfilled the ICHD-3 criteria for migraine and had ≥ 4 MMDs. Sociodemographic and clinical data were registered as well as MMDs, monthly headache days, MHDs, prior and concomitant preventive treatment, medication overuse headache (MOH), migraine evolution, adverse events, and patient-reported outcomes (PROs): headache impact test (HIT-6), migraine disability assessment questionnaire (MIDAS), and patient global improvement change (PGIC). A $> 50\%$ reduction of MMDs after 12 weeks was considered as a response. **RESULTS:** We included 210 patients (female 86.7%, mean age 46.4 years old) from 22 Spanish hospitals from February 2019 to June 2020. Most patients (89.5%) suffered from chronic migraine with a mean evolution of 8.6 years. MOH was present in 70% of patients, and 17.1% had migraine with aura. Patients had failed a mean of 7.8 preventive treatments at baseline (botulinum toxin type A-BoNT/A-had been used by 95.2% of patients). Most patients (67.6%) started with erenumab 70 mg. Sixty-one percent of patients were also simultaneously taking oral preventive drugs and 27.6% were getting simultaneous BoNT/A. Responder rate was 37.1% and the mean reduction of MMDs and MHDs was -6.28 and -8.6, respectively. Changes in PROs were: MIDAS: -35 points, HIT-6: -11.6 points, PIGC: 4.7 points. Predictors of good response were prior HIT-6 score < 80 points ($p = 0.01$), ≤ 5 prior preventive treatment failures ($p = 0.026$), absence of MOH ($p = 0.039$), and simultaneous BoNT/A treatment ($p < 0.001$). Twenty percent of patients had an adverse event, but only two of them were severe (0.9%), which led to treatment discontinuation. Mild constipation was the most frequent adverse event (8.1%). **CONCLUSIONS:** In real-life, in a personalized managed access program, erenumab shows a good effectiveness profile and an excellent tolerability in migraine prevention in our cohort of refractory patients.

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Indexado en: PubMed/WOS/SRJ/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 7.277

Quartil: 1

Categoría: Neurosciences; Clinical Neurology

Posición: Neurosciences 36/273; Clinical Neurology 20/208

Yagüe S, Jucglà A, Povedano M, Lazo C, Veciana M.

Laser evoked potentials in the evaluation of hypoesthetic patches in tuberculoid leprosy.

Clin Neurophysiol. 2021 Feb;132(2):542-544. doi: 10.1016/j.clinph.2020.11.021. Epub 2020 Dec 9.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 3.708

Quartil: 2

Categoría: Clinical Neurology; Neurosciences

Posición: Clinical Neurology 81/208; Neurosciences 134/273

OBSTETRICIA i GINECOLOGIA SALUT DE LA DONA DEXEUS

Nº Artículos indexados: 55 Factor de Impacto total: 251.068 Factor impacto medio x artículo: 4.565

Alcazar JL, Carazo P2, Pegenaute L, Gurrea E, Campos I, Neri M, **Pascual MA**, Guerriero S.

Preoperative Assessment of Cervical Involvement in Endometrial Cancer by Transvaginal Ultrasound and Magnetic Resonance Imaging: A Systematic Review and Meta-Analysis.

[Article in English]

Ultraschall Med. 2021 Mar 23. doi: 10.1055/a-1408-2292. Online ahead of print.

OBJECTIVE: To compare the diagnostic accuracy of transvaginal ultrasound (TVS) and magnetic resonance imaging (MRI) for detecting cervical infiltration by endometrial carcinoma using meta-analysis assessment. **METHODS:** An extensive search of papers comparing TVS and MRI for assessing cervical infiltration in endometrial cancer in the same set of patients was performed in Medline (Pubmed), Web of Science, and the Cochrane Database. Quality was assessed using QUADAS-2 tool (Quality Assessment of Diagnostic Accuracy Studies-2). Quantitative meta-analysis was performed. **RESULTS:** Our extended search identified 12 articles that used both techniques in the same set of patients and were included in the meta-analysis. The risk of bias for most studies was high for patient selection and index tests in QUADAS-2. Overall, the pooled estimated sensitivity and specificity for diagnosing cervical infiltration in women with endometrial cancer were identical for both techniques [69% (95% CI, 51%-82%) and 93% (95% CI, 90%-95%) for TVS, and 69% (95% CI, 57%-79%) and 91% (95% CI, 90%-95%) for MRI, respectively]. No statistical differences were found when comparing both methods. Heterogeneity was high for sensitivity and moderate for specificity when analyzing TVS and moderate for both sensitivity and specificity in the case of MRI. **CONCLUSION:** TVS and MRI showed very similar diagnostic performance for diagnosing cervical involvement in women with endometrial cancer.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.548

Quartil: 1

Categoría: Acoustics; Radiology, Nuclear Medicine & Medical Imaging

Posición: Acoustics 3/32; Nuclear Medicine & Medical Imaging 14/134

Álvarez M, Gaggiotti-Marre S, Martínez F, Coll L, García S, González-Foruria I, Rodríguez I, Parriego M, Polyzos NP, Coroleu B.

Individualised luteal phase support in artificially prepared frozen embryo transfer cycles based on serum progesterone levels: a prospective cohort study.

Hum Reprod. 2021 May 17;36(6):1552-1560. doi: 10.1093/humrep/deab031.

STUDY QUESTION: Does an individualised luteal phase support (iLPS), according to serum progesterone (P4) level the day prior to euploid frozen embryo transfer (FET), improve pregnancy outcomes when started on the day previous to embryo transfer? **SUMMARY ANSWER:** Patients with low serum P4 the day prior to euploid FET can benefit from the addition of daily subcutaneous P4 injections (Psc), when started the day prior to FET, and achieve similar reproductive outcomes compared to those with initial adequate P4 levels. **WHAT IS KNOWN ALREADY:** The ratio between FET/IVF has spectacularly increased in the last years mainly thanks to the pursuit of an ovarian hyperstimulation syndrome free clinic and the development of preimplantation genetic testing (PGT). There is currently a big concern regarding the endometrial preparation for FET, especially in relation to serum P4 levels around the time of embryo transfer. Several studies have described impaired pregnancy outcomes in those patients with low P4 levels around the time of FET, considering 10 ng/ml as one of the most accepted reference values. To date, no prospective study has been designed to compare the reproductive outcomes between patients with adequate P4 the day previous to euploid FET and those with low, but restored P4 levels on the transfer day after iLPS through daily Psc started on the day previous to FET. **STUDY DESIGN,**

SIZE, DURATION: A prospective observational study was conducted at a university-affiliated fertility centre between November 2018 and January 2020 in patients undergoing PGT for aneuploidies (PGT-A) IVF cycles and a subsequent FET under hormone replacement treatment (HRT). A total of 574 cycles (453 patients) were analysed: 348 cycles (leading to 342 euploid FET) with adequate P4 on the day previous to FET, and 226 cycles (leading to 220 euploid FET) under iLPS after low P4 on the previous day to FET, but restored P4 levels on the transfer day. **PARTICIPANTS/MATERIALS, SETTING, METHODS:** Overall we included 574 HRT FET cycles (453 patients). Standard HRT was used for endometrial preparation. P4 levels were measured the day previous to euploid FET. P4 > 10.6 ng/ml was considered as adequate and euploid FET was performed on the following day (FET Group 1). P4 < 10.6 ng/ml was considered as low, iLPS was added in the form of daily Psc injections, and a new P4 analysis was performed on the following day. FET was only performed on the same day when a restored P4 > 10.6 ng/ml was achieved (98.2% of cases) (FET Group 2). **MAIN RESULTS AND THE ROLE OF CHANCE:** Patient's demographics and cycle parameters were comparable between both euploid FET groups (FET Group 1 and FET Group 2) in terms of age, weight, oestradiol and P4 levels and number of embryos transferred. No statistically significant differences were found in terms of clinical pregnancy rate (56.4% vs 59.1%: rate difference (RD) -2.7%, 95% CI [-11.4; 6.0]), ongoing pregnancy rate (49.4% vs 53.6%: RD -4.2%, 95% CI [-13.1; 4.7]) or live birth rate (49.1% vs 52.3%: RD -3.2%, 95% CI [-12; 5.7]). No significant differences were also found according to miscarriage rate (12.4% vs 9.2%: RD 3.2%, 95% CI [-4.3; 10.7]). **LIMITATIONS, REASONS FOR CAUTION:** Only iLPS through daily Psc was evaluated. The time for Psc injection was not stated and no serum P4 determinations were performed once the pregnancy was achieved. **WIDER IMPLICATIONS OF THE FINDINGS:** Our study provides information regarding an 'opportunity window' for improved ongoing pregnancy rates and miscarriage rates through a daily Psc injection in cases of inadequate P4 levels the day previous to FET (P4 < 10.6 ng/ml) and restored values the day of FET (P4 > 10.6 ng/ml). Only euploid FET under HRT were considered, avoiding one of the main reasons of miscarriage and implantation failure and overcoming confounding factors such as female age, embryo quality or ovarian stimulation protocols. **STUDY FUNDING/COMPETING INTEREST(S):** No external funding was received. B.C. reports personal fees from MSD, Merck Serono, Ferring Pharmaceuticals, IBSA and Gedeon Richter outside the submitted work. N.P. reports grants and personal fees from MSD, Merck Serono, Ferring Pharmaceuticals, Theramex and Besins International and personal fees from IBSA and Gedeon Richter outside the submitted work. The remaining authors have no conflicts of interest to declare. **TRIAL REGISTRATION NUMBER:** NCT03740568.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.918 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

Álvarez M, Rodríguez I, Polyzos NP, Coroleu B.

Reply: Individualized luteal phase support in artificially prepared frozen embryo transfer cycles based on serum progesterone levels: a prospective cohort study.

Hum Reprod. 2021 Aug 18;36(9):2623-2624. doi: 10.1093/humrep/deab141.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.918 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

Bailón Queiruga M, Delgado-Morell A, Peró Garcia M, **Coll Girona S**, Gich Saladich I, Porta Roda O.

What do female university students know about pelvic floor disorders? A cross-sectional survey.

Int Urogynecol J. 2021 May 15. doi: 10.1007/s00192-021-04828-5. Online ahead of print.

INTRODUCTION AND HYPOTHESIS: Pelvic floor dysfunction (PFD) is common in women but few seek medical attention. Poor recognition of the condition as pathological and unawareness of treatments may account for low consultation rates. **METHODS:** This cross-sectional study was based on an online survey that was responded to in February and March 2020 by 768 female university students. Knowledge of PFD was assessed using the Prolapse and Incontinence Knowledge Questionnaire (PIKQ). Descriptive and inferential analyses were performed using IBM-SPSS (V26.0). **RESULTS:** Respondents had poor knowledge of PFD and especially of pelvic organ prolapse. Health science students (n = 531; 69.1%) obtained significantly higher scores ($p < 0.001$) than other students (n = 237; 30.9%). Those who had received information on how to perform pelvic floor muscle training were more likely to score higher than those who had not received previous information. **CONCLUSIONS:** While health science students have better knowledge of PFD than other students, university students in general are little aware of PFD. Most students considered the issue of PFD to be important and wanted more information. Our findings may be useful in planning strategies to raise women's awareness of PFD and its prevention and treatment.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 2.894 **Quartil:** 2 **Categoría:** Obstetrics & Gynecology; Urology & Nephrology
Posición: Obstetrics & Gynecology 38/83; Urology & Nephrology 44/90

Boned-López J, Alcázar JL, Errasti T, Ruiz-Zambrana A, **Rodríguez I, Pascual MA**, Guerriero S.

Severe pain during hysterosalpingo-contrast sonography (HyCoSy): a systematic review and meta-analysis.
Arch Gynecol Obstet. 2021 Dec;**304(6):1389-1398.** doi: [10.1007/s00404-021-06188-3](https://doi.org/10.1007/s00404-021-06188-3).

PURPOSE: To assess the frequency of severe pain perception during hysterosalpingo-contrast sonography (HyCoSy) in infertile women and to assess whether there are differences in the frequency of associated pain according to the contrast used. **DESIGN:** Systematic review and meta-analysis. **PATIENTS:** Women undergoing HyCoSy due to infertility. **INTERVENTIONS:** Searches were carried out in two databases (Pubmed and Web of Science). We included prospective or retrospective cohort observational studies that specified the type of contrast used during HyCoSy and reported data regarding the number of patients who perceived severe pain during the procedure and the scale used for pain perception score. **MAIN OUTCOME MEASURES:** Pooled frequency of severe pain perception during HyCoSy and the pooled frequency of severe pain perception based on the contrast used. **RESULTS:** Twenty-nine studies were included in this meta-analysis including a total of 7139 patients. In 10 studies, Saline solution with air was used as contrast EchoVist™ was used in ten studies, in five studies, SonoVue™ was used and in four studies, ExEm-Foam™ was used as contrast. Pooled estimated frequency of severe pain perception during HyCoSy was 6% (95% CI 4-9). No statistically significant differences have been described regarding frequency of severe pain perception in relation to the different contrasts used. **CONCLUSIONS:** HyCoSy is a tolerable outpatient procedure. We did not find any evidence that one specific contrast was better tolerated than any other was.

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Factor Impacto: 2.344 **Quartil:** 3 **Categoría:** Obstetrics & Gynecology **Posición:** 53/83

Boudry L, **Racca A**, Tournaye H, Blockeel C.

Type and dose of gonadotropins in poor ovarian responders: does it matter?

Ther Adv Reprod Health. 2021 Jun **27;15:26334941211024203.** doi:
[10.1177/26334941211024203.](https://doi.org/10.1177/26334941211024203) eCollection 2021 Jan-Dec.

Infertile patients with a diminished ovarian reserve, also referred to as poor ovarian responders, constitute a substantial and increasing population of patients undergoing in vitro fertilization. The management of patients

with poor ovarian response is still a controversial issue. Almost a century has passed since the introduction of the first gonadotropin. A broad collection of urinary and recombinant gonadotropins, including biosimilars, is commercially available now. Despite great advances in assisted reproductive technology, there remains uncertainty about the optimal treatment regimen for ovarian stimulation in poor ovarian responders. Although oocyte donation is the most successful and ultimate remedy for poor ovarian responders, most patients persist on using their own oocytes in several attempts, to achieve the desired pregnancy. The aim of this review is twofold: first, to provide an overview of the commercially available gonadotropins and summarize the available evidence supporting the use of one or another for ovarian stimulation in poor ovarian responders, and second, to address the controversies on the dosage of gonadotropins for this specific in vitro fertilization population.

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Indexado en: PubMed/WOS/JCR/JCI/ Emerging Sources Citation Index (ESCI)

Journal Citation Index: N/A

Categoria: Obstetrics & Gynecology N/A

Brito M, Gamito M, **Neves AR**, Caeiro F, Martins A, Dias E, Veríssimo C.

Conservative management of a pregnancy complicated by preeclampsia and postpartum spontaneous hepatic rupture: A case report and review of the literature.

Eur J Obstet Gynecol Reprod Biol. 2021 Oct 18;267:79-89. doi: 10.1016/j.ejogrb.2021.10.017. Online ahead of print.

INTRODUCTION AND OBJECTIVES: Most spontaneous hepatic rupture cases are associated with a pregnancy-induced hypertensive disorder like preeclampsia and HELLP syndrome. Although it is a rare complication, it is still associated with high maternal and fetal morbidity and mortality rates. With this study, we aim to present a case report and review the available literature on hepatic rupture associated with hypertensive disorders of the pregnancy. **METHODS:** We present a case report and a review of the literature of the last 20 years on hepatic rupture associated with pregnancy-induced hypertensive disorders. The selected cases were reviewed to collect information on maternal characteristics, clinical presentation, diagnostic studies, therapeutic modalities and maternal and fetal outcomes. **RESULTS:** Our review has found 57 publications describing a total of 93 cases of hepatic hemorrhage with capsule rupture associated with pregnancy-induced hypertensive disorders. Most of the patients were less than 35 years old and primiparous and the first symptoms of hepatic rupture included epigastric and right upper abdominal pain. Most of the diagnoses were made during surgery without previous diagnosis and, in the majority of cases, a surgical approach was necessary to achieve hemostasis. Perihepatic packing was the most used surgical method. **DISCUSSION/CONCLUSION:** Our clinical case and literature review reinforces the importance of closely monitoring all pregnancies complicated with hypertensive disorders, including in the postpartum period. Although hepatic rupture accounts for high maternal and fetal morbidity and mortality rates, it is possible to keep a conservative approach with good maternal and fetal outcomes, with a high index of suspicion, an early diagnosis and a multidisciplinary approach.

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Factor Impacto: 1.565

Quartil: 3

Categoria: Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 22/25; Obstetrics & Gynecology 53/83

Coll S, Murillo E, Serra B, Prats P.

Meningitis puerperal por Enterococcus faecalis secundaria a anestesia neuroaxial.

Enferm Infecc Microbiol Clin. 2021; 39(4):211-212

Indexado en: PubMed

Coll S, Feliu S, Montero C, Pellisé-Tintoré M, **Tresserra F**, Rodríguez I, Barri-Soldevila PN.

Evolution of laparoscopic myomectomy and description of two hemostatic techniques in a large teaching gynecological center.

Eur J Obstet Gynecol Reprod Biol. 2021 Oct;265:181-189. doi: 10.1016/j.ejogrb.2021.08.023.

OBJECTIVE: To provide a description of laparoscopic myomectomy and the two hemostatic techniques performed over the last 11 years in a single reference center for gynecology and obstetrics and to evaluate the factors associated with favorable surgical outcomes. **STUDY DESIGN:** We retrospectively analyzed 625 who underwent laparoscopic myomectomy from January 2009 to December 2019. **RESULTS:** Of 625 patients, 437 (69.8%) were symptomatic. The most common symptoms were heavy uterine bleeding (33.2%). 188 patients (30.1%) were asymptomatic but were operated in 77 cases (12.3%) for rapid fibroid growth, 32 (5.1%) for uterine cavity distortion and, in 45 cases (8.6%), the myomectomy was indicated during a surgery for other medical reason due to its accessibility. In 173 cases (27.9%) intramyometrial adrenaline was injected and in 246 cases (39.7%) a temporary blockage of the uterus blood supply was performed. Only 35 (5.6%) patients presented complications, of which, 14 (40%) were hemorrhagic. These hemorrhagic complications were more frequent when intramyometrial adrenaline was used (5,8%) than after the temporary clipping of the uterine arteries and infundibulopelvic ligaments (0,8%; $p < 0,001$). In the multivariate logistic regression model, the only factor statistically associated with favorable surgical outcome was the use of temporary clipping of the uterine arteries at their origin and infundibulopelvic ligaments as hemostatic technique during the surgery. **CONCLUSION:** Laparoscopic myomectomy was generally safe with a high level of favorable outcomes. The temporary clipping of uterine arteries and infundibulopelvic ligaments presented fewer intraoperative bleedings compared with injecting intramyometrial adrenaline.

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Factor Impacto: 2.435

Quartil: 3

Categoría: Reproductive Biology; Obstetrics& Gynecology

Posición: Reproductive Biology 22/30; Obstetrics& Gynecology 49/83

Coll L, Parriego M, Mateo S, García-Monclús S, Rodríguez I, Boada M, Coroleu B, Polyzos NP, Vidal F, Veiga A.

Prevalence, types and possible factors influencing mosaicism in IVF blastocysts: results from a single setting.

Reprod Biomed Online. 2021 Jan;42(1):55-65. doi: 10.1016/j.rbmo.2020.09.025. Epub 2020 Oct 4.

RESEARCH QUESTION: Are intrinsic or extrinsic factors associated with embryo mosaicism prevalence in IVF cycles? **DESIGN:** Retrospective cohort study of preimplantation genetic testing for aneuploidy (PGT-A) cycles carried out at a university-affiliated IVF clinic between October 2017 and October 2019. Trophectoderm biopsies were analysed by next generation sequencing. Mosaicism prevalence, type of anomaly and the chromosomes involved were analysed. Intrinsic and extrinsic factors potentially inducing mosaicism were studied: maternal and paternal age, antral follicle count, cumulus-oocyte complexes retrieved, female body mass index, PGT-A indication, sperm concentration, total dosage of gonadotrophins, embryo quality and day of blastocyst formation, single-step commercial media used and biopsy operator. **RESULTS:** Overall prevalence of mosaicism in our PGT-A setting was 13.9%. In segmental mosaicism, larger chromosomes tended to be more affected, which was not observed in whole-chromosome mosaicism. Additionally, segmental mosaicism was mostly observed in monosomy (69.6%; $P < 0.01$) compared with whole-chromosome mosaicism (49.7% monosomies versus 50.3% trisomies; $P = 0.83$). Although a high inter-patient variability was observed, only paternal age showed a positive association with mosaicism (adjusted OR 1.26, 95% CI 1.02 to 1.54) among the analysed variables. **CONCLUSIONS:** Our results suggest remarkable differences in the mechanisms generating segmental and whole-chromosome mosaicism, indicating that they may deserve different consideration when studying them and when prioritizing them for transfer. Male factor seems to be associated with mosaicism and may be worthy of specific assessment in future studies.

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Factor Impacto: 3.828 **Quartil:** 1 **Categoría:** Obstetrics & Gynecology; Reproductive Biology

Posición: Obstetrics & Gynecology 17/83; Reproductive Biology 11/30 (Q2)

Cruz-Lemini M, Ferriols Perez E, de la Cruz Conty ML, Caño Aguilar A, Encinas Pardilla MB, **Prats Rodríguez P**, Muner Hernando M, Forcen Acebal L, Pintado Recarte P, Medina Mallen MDC, Perez Perez N, Canet Rodriguez J, Villalba Yarza A, Nieto Velasco O, Del Barrio Fernandez PG, Orizales Lago CM, Marcos Puig B, Muñoz Abellana B, Fuentes Ricoy L, Rodriguez Vicente A, Janeiro Freire MJ, Alferéz Alvarez-Mallo M, Casanova Pedraz C, Alomar Mateu O, Lesmes Heredia C, Wizner de Alva JC, Posadas San Juan A, Macia Badia M, Alvarez Colomo C, Sanchez Muñoz A, Pratcorona Alicart L, Alonso Saiz R, Lopez Rodriguez M, Barbancho Lopez MC, Meca Casbas MR, Vaquerizo Ruiz O, Moran Antolin E, Nuñez Valera MJ, Fernandez Fernandez C, Tubau Navarra A, Cano Garcia AM, Soldevilla Perez S, Gattaca Abasolo I, Adanez Garcia J, Puertas Prieto A, Ostos Serna R, Guadix Martin MDP, Catalina Coello M, Espuelas Malon S, Sainz Bueno JA, Granell Escobar MR, Cruz Melguizo S, Martinez Perez O, On Behalf Of The Spanish Obstetric Emergency Group.

Obstetric Outcomes of SARS-CoV-2 Infection in Asymptomatic Pregnant Women.

Viruses. 2021 Jan 15;13(1):112. doi: 10.3390/v13010112.

Around two percent of asymptomatic women in labor test positive for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in Spain. Families and care providers face childbirth with uncertainty. We determined if SARS-CoV-2 infection at delivery among asymptomatic mothers had different obstetric outcomes compared to negative patients. This was a multicenter prospective study based on universal antenatal screening for SARS-CoV-2 infection. A total of 42 hospitals tested women admitted for delivery using polymerase chain reaction, from March to May 2020. We included positive mothers and a sample of negative mothers asymptomatic throughout the antenatal period, with 6-week postpartum follow-up. Association between SARS-CoV-2 and obstetric outcomes was evaluated by multivariate logistic regression analyses. In total, 174 asymptomatic SARS-CoV-2 positive pregnancies were compared with 430 asymptomatic negative pregnancies. No differences were observed between both groups in key maternal and neonatal outcomes at delivery and follow-up, with the exception of prelabor rupture of membranes at term (adjusted odds ratio 1.88, 95% confidence interval 1.13-3.11; $p = 0.015$). Asymptomatic SARS-CoV-2 positive mothers have higher odds of prelabor rupture of membranes at term, without an increase in perinatal complications, compared to negative mothers. Pregnant women testing positive for SARS-CoV-2 at admission for delivery should be reassured by their healthcare workers in the absence of symptoms.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 5.048

Quartil: 2

Categoría: Virology

Posición: 10/36

Cruz Melguizo S, de la Cruz Conty ML, Carmona Payán P, Abascal-Saiz A, Pintando Recarte P, González Rodríguez L, Cuenca Marín C, Martínez Varea A, Oreja Cuesta AB, **Rodríguez PP**, Fernández Buhigas I, Rodríguez Gallego MV, Fernández Alonso AM, López Pérez R, Broullón Molanes JR, Encinas Pardilla MB, Ramírez Gómez M, Gimeno Gimeno MJ, Sánchez Muñoz A, Martínez-Pérez O, On Behalf Of The Spanish Obstetric Emergency Group S O E G.

Pregnancy Outcomes and SARS-CoV-2 Infection: The Spanish Obstetric Emergency Group Study.

Viruses. 2021 May 7;13(5):853. doi: 10.3390/v13050853.

Pregnant women who are infected with SARS-CoV-2 are at an increased risk of adverse perinatal outcomes. With this study, we aimed to better understand the relationship between maternal infection and perinatal outcomes, especially preterm births, and the underlying medical and interventionist factors. This was a prospective observational study carried out in 78 centers (Spanish Obstetric Emergency Group) with a cohort of 1347 SARS-CoV-2 PCR-positive pregnant women registered consecutively between 26 February and 5 November

2020, and a concurrent sample of PCR-negative mothers. The patients' information was collected from their medical records, and the association of SARS-CoV-2 and perinatal outcomes was evaluated by univariable and multivariate analyses. The data from 1347 SARS-CoV-2-positive pregnancies were compared with those from 1607 SARS-CoV-2-negative pregnancies. Differences were observed between both groups in premature rupture of membranes (15.5% vs. 11.1%, $p < 0.001$); venous thrombotic events (1.5% vs. 0.2%, $p < 0.001$); and severe pre-eclampsia incidence (40.6 vs. 15.6%, $p = 0.001$), which could have been overestimated in the infected cohort due to the shared analytical signs between this hypertensive disorder and COVID-19. In addition, more preterm deliveries were observed in infected patients (11.1% vs. 5.8%, $p < 0.001$) mainly due to an increase in iatrogenic preterm births. The prematurity in SARS-CoV-2-affected pregnancies results from a predisposition to end the pregnancy because of maternal disease (pneumonia and pre-eclampsia, with or without COVID-19 symptoms).

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 5.048

Quartil: 2

Categoría: Virology

Posición: 10/36

Cuñarro-López Y, Larroca SG, Pintado-Recarte P, Hernández-Martín C, **Prats-Rodríguez P**, Cano-Valderrama Ó, Cueto-Hernández I, Ruiz-Labarta J, Muñoz-Chápuli MDM, Martínez-Pérez Ó, Ortega MA, De León-Luis JA.

Influence of the Human Development Index on the Maternal-Perinatal Morbidity and Mortality of Pregnant Women with SARS-CoV-2 Infection: Importance for Personalized Medical Care.

J Clin Med. 2021 Aug 17;10(16):3631. doi: 10.3390/jcm10163631.

Coronavirus disease-19 (COVID-19) is perhaps the most worrisome pandemic in the 21st century, having entailed devastating consequences for the whole society during the last year. Different studies have displayed an existing association between pregnancy and COVID-19 severity due to the various physiological changes that occur during gestation. Recent data identified maternal country of origin as an important determinant of COVID-19 presentation in pregnant women. However, the explanation of this fact remains to be fully elucidated. Therefore, the purpose of this work is to analyze the possible relationship between Human Development Index (HDI) of maternal country of origin with the morbimortality of pregnant women and their newborns. Here, we conducted a multicentric, ambispective, observational case-control study (1:1 ratio) and compare with the HDI of each country (group 1-very high HDI, group 2-high HDI, group 3-medium HDI, and group 4-low HDI). In total, 1347 pregnant women with confirmed SARS-CoV-2 infection (cases) were enrolled, and each was paired with one control to give a total number of 2694 participants from 81 tertiary care centers. Among the women with SARS-CoV-2 infection, more cases were produced of perinatal mortality, overall maternal morbidity, COVID-19 maternal morbidity, C-sections, hypertensive maternal morbidity, and perinatal morbidity. Our results described an inverse association between HDI and maternofetal morbidity and mortality. Moreover, the countries with an HDI lower than 1 showed higher rates of patients with maternal COVID-19-related morbidity (6.0% vs. 2.4%, $p < 0.001$), a need for oxygen therapy (4.7% vs. 1.8%, $p < 0.001$), and maternal ICU admission (2.6% vs. 1.0%, $p = 0.007$). Compared to other risk factors such as overweight, obesity, preexisting and obstetric comorbidities, HDI emerged as an independent risk factor explaining much of the increased maternal-perinatal morbidity and mortality detected in our group of cases. Further research is needed to establish to confirm the real impact of this factor and its components on pregnancy outcomes.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 4.241

Quartil: 1

Categoría: Medicine, General & Internal

Posición: 39/69

Drakopoulos P, Bardhi E, Scherer S, Blockeel C, Verheyen G, Anckaert E, Tournaye H, **Polyzos NP**.

Androgens and Anti-Müllerian Hormone in Infertile Patients.

Reprod Sci. 2021 Mar 22. doi: 10.1007/s43032-021-00539-w. Online ahead of print.

Erratum in Reprod Sci. 2021 Apr 7;

To investigate whether there is an association between androgens and ovarian reserve, expressed through anti-Müllerian hormone. This is a retrospective cross-sectional analysis of all consecutive women attending a tertiary fertility center, who presented with regular menstrual cycles. Patients had their AMH values measured with the same AMH assay (Immunotech (IOT) Beckmann Coulter assay), the same day in which androgens sampling was performed. Women with PCOS or other forms of androgen excess or untreated endocrine or metabolic disorders were excluded. A total of 942 women were included. Significant correlation was observed between total testosterone/free androgens index (FAI)/DHEAS and AMH (Spearman's $r = 0.20/0.14/0.13$, P value < 0.001 , P value < 0.001 , and P value < 0.001 , respectively). After multiple linear regression analysis adjusting for confounders (age, BMI, cause of infertility, day of the menstrual cycle when the blood sample was performed), the regression slope in all participants for total testosterone predicting logAMH was 0.20 (P value < 0.001). Similarly, FAI was significantly associated with logAMH (regression coefficient = 0.04, P value = 0.04). In contrast, DHEAS was not significantly associated with logAMH. There was a significant, but weak relation between testosterone and AMH, while no significant association was observed between DHEAS and AMH. Future research is needed to elucidate whether testosterone supplementation may have any effect on ovarian function.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 3.060 **Quartil:** 2 **Categoría:** Obstetrics & Gynecology; Reproductive Biology
Posición: Obstetrics & Gynecology 30/83; Reproductive Biology 18/30 (Q3)

Drakopoulos P, Bardhi E, Scherer S, Blockeel C, Verheyen G, Anckaert E, Tournaye H, **Polyzos NP.**

Correction to: Androgens and Anti-Müllerian Hormone in Infertile Patients.

Reprod Sci. 2021 Apr 7. doi: 10.1007/s43032-021-00569-4. Online ahead of print.

Erratum for Reprod Sci. 2021 Mar 22;

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Factor Impacto: 3.060 **Quartil:** 2 **Categoría:** Obstetrics & Gynecology; Reproductive Biology
Posición: Obstetrics & Gynecology 30/83; Reproductive Biology 18/30

Engels Calvo V, Cruz Melguizo S, Abascal-Saiz A, Forcén Acebal L, **Sánchez-Migallón A.** Pintado Recarte P, Cuenca Marín C, Marcos Puig B, Del Barrio Fernández PG, Nieto Velasco O, de la Cruz Conty ML, Martínez-Perez O; Spanish Obstetric Emergency Group.

Perinatal outcomes of pregnancies resulting from assisted reproduction technology in SARS-CoV-2-infected women: a prospective observational study.

Fertil Steril. 2021 Sep;116(3):731-740. doi: 10.1016/j.fertnstert.2021.04.005.

Collaborators: Garrido Luque MB, Fernández CF, Yarza AV, Canedo Carballeira EM, Dueñas Carazo MB, Aguilar RR, Sánchez-Vegazo García Á, Silveiras EÁ, Pardo Pumar MI, Álvarez-Mallo MA, Carmona VM, Pérez NP, Colomo CÁ, Mateu OA, Di Leo CM, Millán MDCP, García AM, Martínez JN, Fornell AM, Salvador EP, Gómez TM, Meca Casbas MR, Grimalt NF, Aquisé A, Gil MDM, Amorós EC, Sánchez AA, Conca Rodero MI, Oreja Cuesta AB, Aguilar CR, García SF, Gómez MR, Aguilar Galán EV, Pérez RL, Luque CB, Jiménez Losa LM, Pérez SS, Granell Escobar MR, González MD, Blaya FN, Wizner de Alva JC, Carulla RP, Sánchez EC, Rodríguez JC, Antolín EM, Macià M, Pratcorona L, Abásolo IG, Borde BM, Ruiz ÓV, Aragón JR, Seoane RG, González MT, González LM, Heredia CL, Broullón Molanes JR, Gimeno Gimeno MJ, Posadas San Juan AM, Vanegas OG, Fernández Alonso AM, Meca LD, Prieto AP, Martín MDPG, Orizales Lago CM, Sainz Bueno JA, Coello MC, José Núñez Valera M, González LC, García JA, Ferriols-Pérez E, Roqueta M, Encinas Pardilla MB, Sánchez MG, Rodríguez LG, Recarte PP, Paredes EP, Payán PC, Iriarte YF, San Frutos Llorente L.

OBJECTIVE: To evaluate the perinatal and maternal outcomes of pregnancies in women infected with SARS-CoV-2, comparing spontaneous and in vitro fertilization (IVF) pregnancies (with either own or donor oocytes). **DESIGN:** Multicenter, prospective, observational study. **SETTING:** 78 centers participating in the Spanish

COVID19 Registry. **PATIENT(S)**: 1,347 pregnant women with SARS-CoV-2 positive results registered consecutively between February 26 and November 5, 2020. **INTERVENTION(S)**: The patients' information was collected from their medical records, and multivariable regression analyses were performed, controlling for maternal age and the clinical presentation of the infection. **MAIN OUTCOME MEASURE(S)**: Obstetrics and neonatal outcomes, pregnancy comorbidities, intensive care unit admission, mechanical ventilation need, and medical conditions. **RESULT(S)**: The IVF group included 74 (5.5%) women whereas the spontaneous pregnancy group included 1,275 (94.5%) women. The operative delivery rate was high in all patients, especially in the IVF group, where cesarean section became the most frequent method of delivery (55.4%, compared with 26.1% of the spontaneous pregnancy group). The reason for cesarean section was induction failure in 56.1% of the IVF patients. IVF women had more gestational hypertensive disorders (16.2% vs. 4.5% among spontaneous pregnancy women, adjusted odds ratio [aOR] 5.31, 95% confidence interval [CI] 2.45-10.93) irrespective of oocyte origin. The higher rate of intensive care unit admittance observed in the IVF group (8.1% vs. 2.4% in the spontaneous pregnancy group) was attributed to preeclampsia (aOR 11.82, 95% CI 5.25-25.87), not to the type of conception. **CONCLUSION(S)**: A high rate of operative delivery was observed in pregnant women infected with SARS-CoV-2, especially in those with IVF pregnancies; method of conception did not affect fetal or maternal outcomes, except for preeclampsia. **CLINICAL TRIAL REGISTRATION NUMBER**: NCT04558996.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 7.329 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 2/30; Obstetrics & Gynecology 4/83

ESHRE COVID-19 Working Group, Gianaroli L, Ata B, Lundin K, Rautakallio-Hokkanen S, Tapanainen JS, Vermeulen N, **Veiga A**, Mocanu E.

The calm after the storm: re-starting ART treatments safely in the wake of the COVID-19 pandemic.

Hum Reprod. 2021 Jan 25;36(2):275-282. doi: 10.1093/humrep/deaa285.

The coronavirus disease 2019 (COVID-19) pandemic created a significant impact on medically assisted reproduction (MAR) services. ESHRE decided to mobilize resources in order to collect, analyse, monitor, prepare and disseminate severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) knowledge specifically related to ART and early pregnancy. This article presents the impact of the SARS-CoV-2 pandemic focusing on reproductive healthcare. It details the rationale behind the guidance prepared to support MAR services in organizing and managing the re-start of treatments or in case of any future wave of COVID-19 disease. The guidance includes information on patient selection and informed consent, staff and patient triage and testing, adaptation of ART services, treatment planning and code of conduct. The initiatives detailed in this article are not necessarily COVID-specific and such action plans could be applied effectively to manage similar emergency situations in different areas of medicine, in the future.

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Factor Impacto: 6.918 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

ESHRE COVID-19 Working Group, Ata B, Gianaroli L, Lundin K, Mcheik S, Mocanu E, Rautakallio-Hokkanen S, Tapanainen JS, Vermeulen N, **Veiga A**.

Outcomes of SARS-CoV-2 infected pregnancies after medically assisted reproduction.

Hum Reprod. 2021 Oct 18;36(11):2883-2890. doi: 10.1093/humrep/deab218.

STUDY QUESTION: What is the impact of SARS-CoV-2 infection on the outcome of a pregnancy after medically assisted reproduction? **SUMMARY ANSWER:** Our results suggest that medically assisted reproduction (MAR) pregnancies are not differentially affected by SARS-CoV-2 infection compared to spontaneous pregnancies. **WHAT IS KNOWN ALREADY:** Information on the effects of COVID-19 on pregnancy after MAR is scarce when women get infected during MAR or early pregnancy, even though such information is vital for informing women seeking pregnancy. **STUDY DESIGN, SIZE, DURATION:** Data from SARS-CoV-2 affected MAR pregnancies were collected between May 2020 and June 2021 through a voluntary data collection, organised by the European Society of Human Reproduction and Embryology (ESHRE). **PARTICIPANTS/MATERIALS, SETTING, METHODS:** All ESHRE members were invited to participate to an online data collection for SARS-CoV-2-infected MAR pregnancies. **MAIN RESULTS AND THE ROLE OF CHANCE:** The dataset includes 80 cases from 32 countries, including 67 live births, 10 miscarriages, 2 stillbirths and 1 maternal death. An additional 25 pregnancies were ongoing at the time of writing. **LIMITATIONS, REASONS FOR CAUTION:** An international data registry based on voluntary contribution can be subject to selective reporting with possible risks of over- or under-estimation. **WIDER IMPLICATIONS OF THE FINDINGS:** The current data can be used to guide clinical decisions in the care of women pregnant after MAR, in the context of the COVID-19 pandemic. **STUDY FUNDING/COMPETING INTEREST(S):** The authors acknowledge the support of ESHRE for the data registry and meetings. JT reports grants or contracts from Sigrid Juselius Foundation, EU and Helsinki University Hospital Funds, outside the scope of the current work. The other authors declare that they have no conflict of interest.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.918 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology
Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

Esteban-Escañó J, Castán B, Castán S, **Chóliz-Ezquerro M**, Asensio C, Laliena AR, Sanz-Enguita G, Sanz G, Esteban LM, Savirón R.

Machine Learning Algorithm to Predict Acidemia Using Electronic Fetal Monitoring Recording Parameters. Entropy (Basel). 2021 Dec 30;24(1):68. doi: 10.3390/e24010068.

BACKGROUND: Electronic fetal monitoring (EFM) is the universal method for the surveillance of fetal well-being in intrapartum. Our objective was to predict acidemia from fetal heart signal features using machine learning algorithms. **METHODS:** A case-control 1:2 study was carried out comprising 378 infants, born in the Miguel Servet University Hospital, Spain. Neonatal acidemia was defined as pH < 7.10. Using EFM recording logistic regression, random forest and neural networks models were built to predict acidemia. Validation of models was performed by means of discrimination, calibration, and clinical utility. **RESULTS:** Best performance was attained using a random forest model built with 100 trees. The discrimination ability was good, with an area under the Receiver Operating Characteristic curve (AUC) of 0.865. The calibration showed a slight overestimation of acidemia occurrence for probabilities above 0.4. The clinical utility showed that for 33% cutoff point, missing 5% of acidotic cases, 46% of unnecessary cesarean sections could be prevented. Logistic regression and neural networks showed similar discrimination ability but with worse calibration and clinical utility. **CONCLUSIONS:** The combination of the variables extracted from EFM recording provided a predictive model of acidemia that showed good accuracy and provides a practical tool to prevent unnecessary cesarean sections.

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Factor Impacto: 2.524 **Quartil:** 2 **Categoría:** Physics, Multidisciplinary **Posición:** 38/86

Farrés A, Albarracín A, Serra B, Prats P.

Cesarean rate in selected hospital network of private sector: A retrospective study.

J Healthc Qual Res. 2021 Nov-Dec;36(6):317-323. doi: 10.1016/j.jhqr.2021.06.006.

INTRODUCTION: In Spain over the last two decades, cesarean section (CS) rates have increased from 15 to 25% in the Public Health Sector and from 28 to 38% in the private sector. There are multiples causes for this rise, which are often unclear. The aim of our study is to collect and analyze all the CS rates data from a hospital network of the 42 Quirónsalud Hospitals (private sector) and to assess its distribution regarding the different types of hospitals and patient characteristics. **MATERIAL AND METHODS:** An observational retrospective study between 2017 and 2018 was performed. Hospitals are classified into three groups: large hospitals (11), medium hospitals (17) and small hospitals (14). The cesarean section rate was measured by patient categorization into three groups: total deliveries, low risk cesarean sections and low risk cesarean sections without previous cesarean delivery. **RESULTS:** We analyzed 62,685 deliveries: 42,987 were vaginal deliveries (68.6%) and 19,698 CS (31.4%). The mean age for the total number of deliveries was 34.18 years old, whilst the mean age for the low-risk group was 34.12. Of the 19,698 CS, 18.36% (3618) were in high-risk population and 81.63% (16,080) in low risk population. 69.54% (11,183) of the low-risk CS were in patients without a previous CS. **CONCLUSIONS:** The overall rate of CS in the Quirónsalud group is slightly higher than the one from the Public Healthcare. The older maternal age as well as the hospital resources involved in the delivery attendance can explain this difference.

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Indexado en: PubMed

García-Alfaro P, Rodríguez I, Pascual MA.

Evaluation of the relationship between homocysteine levels and bone mineral density in postmenopausal women.

Climacteric. 2021 May 13:1-7. doi: 10.1080/13697137.2021.1921729. Online ahead of print.

OBJECTIVE: The current study aimed to evaluate the relationship between homocysteine (Hcy) levels and bone mineral density (BMD) in postmenopausal women. **METHODS:** The present, cross-sectional study included 760 postmenopausal women. The following variables were recorded: age, age at menopause, body mass index (BMI), BMD (measured by dual-energy X-ray absorptiometry [DXA] scanning and expressed as lumbar, femoral neck and total hip T-scores), smoking status, biochemical parameters (Hcy, creatinine, calcium, phosphorus, vitamin D and parathormone levels) and vitamin D supplementation. **RESULTS:** The mean age of the sample population was 56.4 ± 5.77 years and the mean age at menopause was 49.9 ± 3.62 years. The mean BMI was 25.2 ± 4.49 kg/m². In the current study, a comparison of the subjects with osteoporosis, osteopenia and normal BMD revealed that the subjects in the low BMD group were significantly older ($p < 0.001$), had a lower age at menopause ($p < 0.001$) and had lower BMI ($p < 0.001$). There was no statistically significant difference among the groups with regard to the plasma levels of Hcy ($p = 0.946$). The levels of Hcy were positively correlated to the creatinine levels ($r = 0.21$). The present study did not observe any significant correlations between the Hcy levels and other parameters. **CONCLUSIONS:** In the present study, 15.3% of the subjects had hyperhomocysteinemia and 62.11% had low BMD. The current results obtained from a group of postmenopausal women suggest that the plasma levels of Hcy are not related to BMD in the lumbar spine (L1-L4), femoral neck and total hip. In the current study, age, age at menopause and low BMI were observed to be associated with low BMD.

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Factor Impacto: 3.005

Quartil: 2

Categoría: Obstetrics & Gynecology

Posición: 33/83

García-Alfaro P, García S, Rodríguez I, Pérez-López FR.

Handgrip strength, dynapenia, and related factors in postmenopausal women.

Menopause. 2021 Oct 18. doi: 10.1097/GME.0000000000001872. Online ahead of print.

OBJECTIVE: This study aimed to evaluate the prevalence of dynapenia and factors related to low dominant handgrip strength (HGS) in postmenopausal women. **METHODS:** A cross-sectional study was performed on 249 postmenopausal women aged 50 to 84 years. The following variables were recorded: age, age at menopause, smoking status, and the HGS measured with a digital dynamometer, body mass index, and adiposity assessed by bioelectric impedance. The physical activity level was evaluated by using the International Physical Activity Questionnaire. Bone mineral density was reported as T-scores, and blood biochemical parameters (calcium, phosphorus, vitamin D, and parathormone levels) were measured. **RESULTS:** 31.3% of women had dynapenia, and those aged ≥ 65 years had lower HGS ($P < 0.001$). Age at menopause was also associated with HGS, with those with menopause < 51 showing lower HGS ($P = 0.005$). Likewise, fat content $\geq 40\%$, and osteopenia/osteoporosis were also related to lower strength ($P < 0.001$). There was no statistically significant difference among HGS with respect to body mass index, smoking status, and plasma levels of vitamin D. A logistic regression model with lower Akaike Information Criterion showed that for every year in age and for each 1% of adiposity, women were more likely to have dynapenia with odd ratio (OR): 1.09; 95% and confidence interval (CI): 1.04 to 1.14 and OR: 1.06; 95% CI: 1.00 to 1.13, respectively. Conversely, women with higher femoral neck T-score were less likely to have dynapenia (OR: 0.53; 95% CI: 0.35-0.78). **CONCLUSIONS:** HGS was associated with age at menopause, bone mineral density, and adiposity adjusted by age. The age and adiposity were significantly associated with a higher risk of dynapenia, whereas women with higher femoral neck T-score were less likely to have dynapenia.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 2.953 Cuartil: 2 Categoría: Obstetrics & Gynecology Posición: 35/83

García-Alfaro P, García S, Rodríguez I, Vergés C.

Dry eye disease symptoms and quality of life in perimenopausal and postmenopausal women.

Climacteric. 2021 Jun;24(3):261-266. doi: 10.1080/13697137.2020.1849087. Epub 2020 Dec 7.

OBJECTIVE: This study aimed to evaluate dry eye disease (DED) symptoms and quality of life (QoL) in a group of perimenopausal and postmenopausal women, based on the Ocular Surface Disease Index (OSDI) questionnaire. **METHODS:** An observational study was performed in a group of 1947 perimenopausal and postmenopausal women, aged between 45 and 79 years. The personal data collected were age, menopause status, age at menopause, and OSDI score. **RESULTS:** The mean age of the group was 54.18 ± 6.84 years, with a mean age at menopause of 49.45 ± 4.02 years. The average OSDI score was 29.20 ± 19.4 . The overall prevalence of DED symptoms was 79%, increasing significantly in postmenopausal women, 76.4% vs. 80.5% ($p = 0.029$). In our group, 37.7% had severe DED symptoms. Ocular symptoms, vision-related functions, and environmental trigger scores were higher in postmenopausal women, leading to a lower QoL. The severity of OSDI score increases with age (β coefficient: 0.15 [95% confidence interval: 0.02; -0.28]), while the severity of OSDI score decreases with a later onset age of menopause (β coefficient: -0.27 [95% confidence interval: -0.55; -0.01]). **CONCLUSIONS:** DED symptoms are highly prevalent in perimenopausal and postmenopausal women. Postmenopausal women had a higher prevalence of symptoms and higher OSDI scores than perimenopausal women. The severity of DED symptoms and vision-related functions leads to poorer QoL.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 3.005 Cuartil: 2 Categoría: Obstetrics & Gynecology Posición: 33/83

García-García I, Alcázar JL, Rodríguez I, Pascual MA, Garcia-Tejedor A, Guerriero S.

Recurrence rate and morbidity after ultrasound-guided transvaginal aspiration of ultrasound benign appearing adnexal cystic masses with and without sclerotherapy: a systematic review and meta-analysis.

J Minim Invasive Gynecol. 2021 Sep 24:S1553-4650(21)01170-5. doi: 10.1016/j.jmig.2021.09.708. Online ahead of print.

OBJECTIVE: To determine the pooled recurrence rate of benign adnexal masses/cysts (namely simple cyst, endometrioma, hydrosalpinx, peritoneal cyst) after transvaginal ultrasound-guided aspiration, with or without sclerotherapy. **DATA SOURCES:** A search of studies published in PubMed and Web of Science (WoS) databases between January 1990 and December 2020. **METHODS OF STUDY SELECTION:** A systematic search strategy was done using medical subject heading (MeSH) terms. Only randomized trials and prospective studies published in English language were included. **TABULATION, INTEGRATION AND RESULTS:** A total of 395 papers were screened. After applying inclusion and exclusion criteria, 20 studies were included in this review comprising data from 1386 patients with a mean follow-up of 11,4 months (range 0,5 - 26,5 months). The overall pooled rate of recurrence of adnexal masses was 27%, (CI 95%: 18-39%). Recurrence rate was significantly higher after only aspiration than after sclerotherapy (53%, CI 95%: 46-60%, vs 14%, CI 95%: 8-22%, $p < .0001$). However, a high heterogeneity across the studies was found. 10 major complications were recorded in the different publications. **CONCLUSION:** In selected population, aspiration with sclerotherapy has a lower recurrence rate compared to without sclerotherapy. However, these results should be interpreted with caution given the heterogeneity of the studies and the lack of randomized controlled trials. Regarding the adoption of this procedure into routine clinical practice, we think that aspiration should be considered an experimental procedure as there are few studies addressing long-term recurrence rate and data comparing this technique with surgical cystectomy are lacking.

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Factor Impacto: 4.137

Quartil: 1

Categoría: Obstetrics & Gynecology

Posición: 14/83

González-Comadran M, Jacquemin B, Cirach M, Lafuente R, Cole-Hunter T, Nieuwenhuijsen M, Brassesco M, Coroleu B, Checa MA.

The effect of short term exposure to outdoor air pollution on fertility.

Reprod Biol Endocrinol. 2021 Oct 6;19(1):151. doi: 10.1186/s12958-021-00838-6.

BACKGROUND: There is evidence to suggest that long term exposure to air pollution could be associated with decreased levels of fertility, although there is controversy as to how short term exposure may compromise fertility in IVF patients and what windows of exposure during the IVF process patients could be most vulnerable. **METHODS:** This prospective cohort study aimed to evaluate the impact of acute exposure that air pollution have on reproductive outcomes in different moments of the IVF process. Women undergoing IVF living in Barcelona were recruited. Individual air pollution exposures were modelled at their home address 15 and 3 days before embryo transfer (15D and 3D, respectively), the same day of transfer (D0), and 7 days after (D7). The pollutants modelled were: PM_{2.5} [particulate matter (PM) $\leq 2.5 \mu\text{m}$], PM_{coarse} (PM between 2.5 and 10 μm), PM₁₀ (PM $\leq 10 \mu\text{m}$), PM_{2.5 abs}, and NO₂ and NO_x. Outcomes were analyzed using multi-level regression models, with adjustment for co-pollutants and confounding factors. Two sensitivity analyses were performed. First, the model was adjusted for subacute exposure (received 15 days before ET). The second analysis was based on the first transfer performed on each patient aiming to exclude patients who failed previous transfers. **RESULTS:** One hundred ninety-four women were recruited, contributing with data for 486 embryo transfers. Acute and subacute exposure to PMs showed a tendency in increasing miscarriage rate and reducing clinical pregnancy rate, although results were not statistically significant. The first sensitivity analysis, showed a significant risk of miscarriage for PM_{2.5} exposure on 3D after adjusting for subacute exposure, and an increased risk of achieving

no pregnancy for PM2.5, PMcoarse and PM10 on 3D. The second sensitivity analysis showed a significant risk of miscarriage for PM2.5 exposure on 3D, and a significant risk of achieving no pregnancy for PM2.5, PMcoarse and PM10 particularly on 3D. No association was observed for nitrogen dioxides on reproductive outcomes.**CONCLUSIONS:** Exposure to particulate matter has a negative impact on reproductive outcomes in IVF patients. Subacute exposure seems to increase the harmful effect of the acute exposure on miscarriage and pregnancy rates. Nitrogen dioxides do not modify significantly the reproductive success.

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Factor Impacto: 5.211 **Quartil:** 1 **Categoría:** Endocrinology & Metabolism; Reproductive Biology

Posición: Endocrinology & Metabolism 34/145; Reproductive Biology 4/30

Guerriero S, Pascual MA, Ajossa S, Neri M, Musa E, Graupera B, Rodriguez I, Alcazar JL.

Artificial intelligence (AI) in the detection of rectosigmoid deep endometriosis.

Eur J Obstet Gynecol Reprod Biol. 2021 Jun;261:29-33. doi: 10.1016/j.ejogrb.2021.04.012. Epub 2021 Apr 14.

OBJECTIVES: The aim of this study was to compare the accuracy of seven classical Machine Learning (ML) models trained with ultrasound (US) soft markers to raise suspicion of endometriotic bowel involvement. **MATERIALS AND METHODS:** Input data to the models was retrieved from a database of a previously published study on bowel endometriosis performed on 333 patients. The following models have been tested: k-nearest neighbors algorithm (k-NN), Naive Bayes, Neural Networks (NNET-neuralnet), Support Vector Machine (SVM), Decision Tree, Random Forest, and Logistic Regression. The data driven strategy has been to split randomly the complete dataset in two different datasets. The training dataset and the test dataset with a 67 % and 33 % of the original cases respectively. All models were trained on the training dataset and the predictions have been evaluated using the test dataset. The best model was chosen based on the accuracy demonstrated on the test dataset. The information used in all the models were: age; presence of US signs of uterine adenomyosis; presence of an endometrioma; adhesions of the ovary to the uterus; presence of "kissing ovaries"; absence of sliding sign. All models have been trained using CARET package in R with ten repeated 10-fold cross-validation. Accuracy, Sensitivity, Specificity, positive (PPV) and negative (NPV) predictive value were calculated using a 50 % threshold. Presence of intestinal involvement was defined in all cases in the test dataset with an estimated probability greater than 0.5.**RESULTS:** In our previous study from where the inputs were retrieved, 106 women had a final expert US diagnosis of rectosigmoid endometriosis. In term of diagnostic accuracy the best model was the Neural Net (Accuracy, 0.73; sensitivity, 0.72; specificity 0.73; PPV 0.52; and NPV 0.86) but without significant difference with the others.**CONCLUSIONS:** The accuracy of ultrasound soft markers in raising suspicion of rectosigmoid endometriosis using Artificial Intelligence (AI) models showed similar results to the logistic model.

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Factor Impacto: 2.435 **Quartil:** 2 **Categoría:** Obstetrics & Gynecology; Reproductive Biology

Posición: Endocrinology & Metabolism 49/83; Reproductive Biology 22/30

Guerriero S, Martinez L, Gomez I, Pascual MA, Ajossa S, Pagliuca M, Alcázar JL.

Diagnostic accuracy of sonography for detecting parametrial involvement in women with pelvic endometriosis: a systematic review and meta-analysis.

Ultrasound Obstet Gynecol. 2021 Nov;58(5):669-676. doi: 10.1002/uog.23754.

OBJECTIVE: The aim of this meta-analysis is to evaluate the diagnostic accuracy of transvaginal ultrasonography (TVS) to detect parametrial endometriosis, using laparoscopy as the reference standard. **METHODS:** A search for studies evaluating the TVS for assessing parametrial endometriosis compared to surgery from January 2000 to December 2020 was performed in PubMed/MEDLINE and Web of Science. The Quality Assessment of Diagnostic Accuracy Studies 2 evaluated the quality of the studies (QUADAS-2). All analyses were performed using MIDAS and METANDI commands. **RESULTS:** We identified 133 citations. Finally, four studies comprising 560 patients were included. Mean prevalence of parametrial endometriosis was 17%. Overall, the pooled estimated sensitivity, specificity, positive likelihood, and negative likelihood ratio of TVS for detecting parametrial endometriosis were 31% (95% confidence interval [CI]= 10% -64%), 98% (95% CI= 95%-99%), 18.5 (95% CI= 8.8-38.9), 0.70 (95% CI=0.46-1.06), respectively. Diagnostic odds ratio (DOR) was 26 (95% CI=10-68). Heterogeneity was high. The visualization of a lesion suspected to be parametrial endometriosis increases significantly the pretest probability of parametrial endometriosis at laparoscopy. **CONCLUSIONS:** The use of TVS for the detection of parametrial endometriosis have a high specificity but a low sensitivity. This article is protected by copyright. All rights reserved.

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Factor Impacto: 7.299

Quartil: 1

Categoria: Acoustics; Radiology; Nuclear Medicine & Medical Imaging

Posición: Radiology, Nuclear Medicine & Medical Imaging 10/134; Acoustics 2/32

Hart RJ, D'Hooghe T, Dancet EAF, Aurell R, Lunenfeld B, Orvieto R, Pellicer A, **Polyzos NP**, Zheng W.

Self-Monitoring of Urinary Hormones in Combination with Telemedicine - a Timely Review and Opinion Piece in Medically Assisted Reproduction.

Reprod Sci. 2021 Nov 15. doi: 10.1007/s43032-021-00754-5. Online ahead of print.

Cycle monitoring via ultrasound and serum-based hormonal assays during medically assisted reproduction (MAR) can provide information on ovarian response and assist in optimizing treatment strategies in addition to reducing complications such as ovarian hyperstimulation syndrome (OHSS). Two surveys conducted in 2019 and 2020, including overall 24 fertility specialists from Europe, Asia and Latin America, confirmed that the majority of fertility practitioners routinely conduct hormone monitoring during MAR. However, blood tests may cause inconvenience to patients. The reported drawbacks of blood tests identified by the survey included the validity of results from different service providers, long waiting times and discomfort to patients due to travelling to clinics for tests and repeated venepunctures. Historically, urine-based assays were used by fertility specialists in clinics but were subsequently replaced by more practical and automated serum-based assays. A remote urine-based hormonal assay could be an alternative to current serum-based testing at clinics, reducing the inconvenience of blood tests and the frequency of appointments, waiting times and patient burden. Here we provide an overview of the current standard of care for cycle monitoring and review the literature to assess the correlation between urine-based hormonal assays and serum-based hormonal assays during MAR. In addition, in this review, we discuss the evidence supporting the introduction of remote urine-based hormonal monitoring as part of a novel digital health solution that includes remote ultrasound and tele-counselling to link clinics and patients at home.

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Indexado en: PubMed

Kiwitt-Cárdenas J, Adoamnei E, Arense-Gonzalo JJ, **Sarabia-Cos L**, Vela-Soria F, Fernández MF, Gosálvez J, Mendiola J, Torres-Cantero AM.

Associations between urinary concentrations of bisphenol A and sperm DNA fragmentation in young men.

BACKGROUND: Bisphenol A (BPA) is one of the most common endocrine disruptor compounds in our environment, promoting a xenoestrogenic state. Numerous studies have shown a relationship between exposure to BPA and male infertility problems. Spermatic DNA integrity is a critical factor for the correct transmission of paternal genetic material to the embryo. However, only a very few studies have investigated the association between urinary BPA concentrations and human sperm DNA fragmentation (SDF). **METHOD:** Cross-sectional study conducted with 158 healthy university students (18-23 years), recruited between 2010 and 2011 in the Region of Murcia (Spain). The subjects provided urine and semen samples on a single day. Urinary BPA concentrations were measured by dispersive liquid-liquid microextraction and ultrahigh performance liquid chromatography with tandem mass spectrometry detection, and SDF analysed using the Sperm Chromatin Dispersion test. Statistical analyses were made using linear regression adjusting for potential covariates and confounding factors. **RESULTS:** No association was found between urinary BPA concentrations and SDF index in the total group. However, in the subgroup of men with SDF index > 30%, significant positive associations across quartiles (p -trend=0.02) and as a continuous BPA levels were observed ($\beta = 0.055$, 95% CI: 0.002; 0.108). **CONCLUSION:** Our results show that, within the subgroup of men with relatively high SDF index, the higher the concentration of BPA the greater the SDF index. Nonetheless, more studies are required to confirm these results and draw conclusions in other male populations.

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Factor Impacto: 6.498 **Quartil:** 1 **Categoría:** Environmental Sciences; Public, Environmental & Occupational Health
Posición: Environmental Sciences 36/274; Public, Environmental & Occupational Health 16/203

Lubián López DM, Butrón Hinojo CA, Castillo Lara M, **Sánchez-Prieto M**, Sánchez-Borrego R, Mendoza Ladrón de Guevara N, González Mesa E.

Relationship of breast volume, obesity and central obesity with different prognostic factors of breast cancer.
Sci Rep. 2021 Jan 21;11(1):1872. doi: 10.1038/s41598-021-81436-9.

The objective of this study was to investigate whether the BC tumor biology in women with larger breast volume, in obese women and especially in women with central adiposity at the moment of diagnosis of BC is more aggressive than in those women without these characteristics. 347 pre- and postmenopausal women with a recent diagnosis of BC were analyzed. In all patients, anthropometric measurements at the time of diagnosis was collected. In 103 of them, the breast volume was measured by the Archimedes method. The Breast volume, BMI, WHR and the menopausal status were related to different well-known pathological prognostic factors for BC. At the time of diagnosis, 35.4% were obese (BMI > 30 kg/m²), 60.2% had a WHR ≥ 0.85, 68.8% were postmenopausal and 44.7% had a breast volume considered "large" (> 600 cc). Between patients with a large breast volume, only a higher prevalence of ER (+) tumors was found (95.3% vs. 77.2%; $p = 0.04$) compared to those with small breast volumes. The obese BC patients showed significantly higher rates of large tumors (45.5% vs. 40.6%; $p = 0.04$), axillary invasion (53.6% vs. 38.8%; $p = 0.04$), undifferentiated tumors (38.2% vs. 23.2%) and unfavorable NPI ($p = 0.04$) than non-obese women. Those with WHR ≥ 0.85 presented higher postsurgical tumor stages (61.7% vs. 57.8%; $p = 0.03$), higher axillary invasion (39.9% vs. 36.0%; $p = 0.004$), more undifferentiated tumors (30.0% vs. 22.3%; $p = 0.009$), higher lymphovascular infiltration (6.5% vs. 1.6%; $p = 0.02$), and a higher NPI (3.6 ± 1.8 vs. 3.2 ± 1.8 ; $p = 0.04$). No statistically significant differences were found according to menopausal status. We conclude that obesity, but especially central obesity can be associated with a more aggressive tumour phenotype. No relation between breast volume and tumoral prognostic factors was found, except for a higher proportion of ER (+) tumor in women with higher breast volume.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Lubián López DM, Butrón Hinojo CA, Arjona Bernal JE, Fasero Laiz M, Alcolea Santiago J, Guerra Vilches V, Casaus Fernández M, Bueno Moral A, Olvera Perdigones A, Rodríguez Rodríguez B, Cuevas Palomino A, Presa Lorite J, Coronado Martín P, **Sánchez-Prieto M**, Sánchez-Borrego R, González-Mesa E.

Resilience and psychological distress in pregnant women during quarantine due to the COVID-19 outbreak in Spain: a multicentre cross-sectional online survey.

J Psychosom Obstet Gynaecol. 2021 Jun;42(2):115-122. doi: 10.1080/0167482X.2021.1896491. Epub 2021 Mar 18.

PURPOSE: To examine the prevalence of depressive and anxiety symptoms and the corresponding risk factors among pregnant women during the confinement due to the COVID-19 outbreak in Spain.**MATERIALS AND METHODS:** Between 15 April and 14 May 2020, a multicentre cross-sectional survey was performed to study depression, anxiety and resilience in a sample of Spanish pregnant women during the lockdown set up by the Government in response to COVID-19 pandemic outbreak. We designed an anonymous online self-administered questionnaire (<https://bit.ly/34RRpq1>) that included the Spanish validated versions of the Edinburgh Postpartum Depression Scale (EPDS), the State-Trait Anxiety Inventory (STAI) and the Connor-Davidson Resilience 10-items Scale (CD-RISC-10).**RESULTS:** A total of 514 pregnant women completed the survey. 72.8% had been confined < 40 days and 27.2% between 41 and 60 days. 182 (35.4%) participants scored over 10, with 21.3% scoring over 13 (75th Percentile) in depressive symptoms rates. We found high trait and anxiety scores, with 223 (43.4%) and 227 (44.2%) pregnant women scoring over the trait and state mean scores. Neither depression, anxiety or resilience levels showed any significant correlation with the length of confinement. We found low CD-RISC-10 scores.**CONCLUSIONS:** We found a high prevalence of depression and anxiety symptoms during the quarantine, although we did not find an increased prevalence of psychological distress according to length of home confinement. Resilience correlated negatively with depression and anxiety.

Indexado en: PubMed/WOS/JCR/Social Sciences Citation Index (SSCI)

Factor Impacto: 1.880 **Cuartil:** 3 **Categoría:** Obstetrics & Gynecology; Psychiatry; Psychology, Clinical
Posición: Obstetrics & Gynecology 37/79; Psychiatry 81/140

Lubián López DM, Butrón Hinojo CA, **Sánchez-Prieto M**, Mendoza N, Sánchez-Borrego R.

Sexual Dysfunction in Postmenopausal Women with Breast Cancer on Adjuvant Aromatase Inhibitor Therapy. Breast Care (Basel). 2021 Aug;16(4):376-382. doi: 10.1159/000510079. Epub 2020 Oct 23.

INTRODUCTION: The aim of this study was to investigate whether postmenopausal women with breast cancer (BC) on adjuvant aromatase inhibitor (AI) therapy have a higher prevalence of female sexual dysfunction (FSD). Second, the aim was to determine the quality of life (QoL) and level of anxiety depending on whether or not they are AI users. **METHODS:** A prospective cross-sectional study involving 168 patients was performed. Three questionnaires were carried out: sexual functioning was evaluated with the Female Sexual Function Index (FSFI), while the EORTC QLQ-BR23 measures to study QoL in patients with BC and the State-Trait Anxiety Inventory (STAI) questionnaire (trait and status) were used to assess anxiety status in patients under treatment with AIs or not. **RESULTS:** 47.6% (80/168) of the postmenopausal BC survivors were not sexually active (mean time after surgery: 48.6 months) despite a relatively low mean age (56.43 years). Postmenopausal AI-treated women had significantly worse sexual function as measured by the FSFI (23.40 ± 5.26 vs. 30.16 ± 2.24 ; $p = 0.000$). There were significant differences between both groups in all domains, except orgasm. The QoL score was 37.67 ± 7.38 in AI users versus 39.00 ± 1.44 among nonusers ($p = 0.053$). Patients under endocrine treatment also presented STAI scores significantly higher (25.83 ± 4.99 vs. 19.00 ± 7.12 ; $p = 0.000$). Trait anxiety was high in both groups, but this was not statistically significant. **CONCLUSIONS:** We observed a high prevalence of sexual inactivity among BC survivors regardless of AI use. Patients with AI use presented significantly higher prevalence of FSD, worse QoL, and greater anxiety.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 2.860

Quartil: 2

Categoría: Obstetrics & Gynecology; Oncology

Posición: Obstetrics & Gynecology 39/83; Oncology 193/242 (Q4)

Maiz N, Tajada M, **Rodríguez MÁ**, Irasarri A, Molina FS, Tubau A, Burgos J, Alonso I, Plasencia W, Rodó C, Pijoan JI, Belar M, De Paco Matallana C.

Three-dimensional ultrasonography for advanced neurosonography (neurosofe-3D): Validation of a brain volume acquisition guideline.

Acta Obstet Gynecol Scand. 2021 Jan;100(1):84-90. doi: 10.1111/aogs.13996. Epub 2020 Oct 8.

INTRODUCTION: This study aimed to evaluate the quality of the brain volumes acquired following an evidence-based guideline for the acquisition of brain volumes. **MATERIAL AND METHODS:** This was a prospective multicenter study. Five centers recruited five cases each, acquiring two volumes per case, at different gestational age ranges. From the collected volumes, 10 operators performed an advanced neurosonography of each case. The evaluable anatomic structures were counted in each volume and expressed as a percentage. The results were compared with those obtained in a previous study where no recommendations had been made for the acquisition of the volumes. **RESULTS:** Five hundred evaluations were included in the study. In the axial plane, 91.5% of the structures were satisfactorily evaluated, 81.8% in the coronal plane and 89.9% in the sagittal plane. These results were significantly better than those obtained in a previous study where the volumes had been acquired without any guidelines and the percentage of evaluable structures were 80% ($P < .001$), 67.1% ($P < .001$) and 55.1% ($P < .001$) in the axial, coronal and sagittal planes, respectively. **CONCLUSIONS:** The application of an evidence-based guideline for the acquisition of brain volumes improves the quality of these by increasing the number of evaluable structures in the volume.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 3.636

Quartil: 1

Categoría: Obstetrics & Gynecology

Posición: 19/83

Martinez-Perez O, **Prats Rodriguez P**, Muner Hernandez M, Encinas Pardilla MB, Perez Perez N, Vila Hernandez MR, Villalba Yarza A, Nieto Velasco O, Del Barrio Fernandez PG, Forcen Acebal L, Orizales Lago CM, Martinez Varea A, Muñoz Abellana B, Suarez Arana M, Fuentes Ricoy L, Martinez Diago C, Janeiro Freire MJ, Alférez Alvarez-Mallo M, Casanova Pedraz C, Alomar Mateu O, Lesmes Heredia C, Wizner de Alva JC, Bernardo Vega R, Macia Badia M, Alvarez Colomo C, Sanchez Muñoz A, Pratcorona Alicart L, Alonso Saiz R, Lopez Rodriguez M, Del Carmen Barbancho Lopez M, Meca Casbas MR, Vaquerizo Ruiz O, Moran Antolin E, Nuñez Valera MJ, Fernandez Fernandez C, Tubau Navarra A, Cano Garcia AM, Baena Luque C, Soldevilla Perez S, Gastaca Abasolo I, Adanez Garcia J, Teulon Gonzalez M, Puertas Prieto A, Ostos Serna R, Del Pilar Guadix Martin M, Catalina Coello M, Ferriols Perez E, Caño Aguilar A, De la Cruz Conty ML, Sainz Bueno JA; Spanish Obstetric Emergency Group.

The association between SARS-CoV-2 infection and preterm delivery: a prospective study with a multivariable analysis.

BMC Pregnancy Childbirth. 2021 Apr 1;21(1):273. doi: 10.1186/s12884-021-03742-4.

BACKGROUND: To determine whether severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2, the cause of COVID-19 disease) exposure in pregnancy, compared to non-exposure, is associated with infection-related obstetric morbidity. **METHODS:** We conducted a multicentre prospective study in pregnancy based on a universal antenatal screening program for SARS-CoV-2 infection. Throughout Spain 45 hospitals tested all women at admission on delivery ward using polymerase-chain-reaction (PCR) for COVID-19 since late March 2020. The cohort of positive mothers and the concurrent sample of negative mothers was followed up until 6-weeks post-partum. Multivariable logistic regression analysis, adjusting for known confounding variables,

determined the adjusted odds ratio (aOR) with 95% confidence intervals (95% CI) of the association of SARS-CoV-2 infection and obstetric outcomes. **MAIN OUTCOME MEASURES:** Preterm delivery (primary), premature rupture of membranes and neonatal intensive care unit admissions. **RESULTS:** Among 1009 screened pregnancies, 246 were SARS-CoV-2 positive. Compared to negative mothers (763 cases), SARS-CoV-2 infection increased the odds of preterm birth (34 vs 51, 13.8% vs 6.7%, aOR 2.12, 95% CI 1.32-3.36, $p = 0.002$); iatrogenic preterm delivery was more frequent in infected women (4.9% vs 1.3%, $p = 0.001$), while the occurrence of spontaneous preterm deliveries was statistically similar (6.1% vs 4.7%). An increased risk of premature rupture of membranes at term (39 vs 75, 15.8% vs 9.8%, aOR 1.70, 95% CI 1.11-2.57, $p = 0.013$) and neonatal intensive care unit admissions (23 vs 18, 9.3% vs 2.4%, aOR 4.62, 95% CI 2.43-8.94, $p < 0.001$) was also observed in positive mothers. **CONCLUSION:** This prospective multicentre study demonstrated that pregnant women infected with SARS-CoV-2 have more infection-related obstetric morbidity. This hypothesis merits evaluation of a causal association in further research.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 3.007

Quartil: 2

Categoría: Obstetrics & Gynecology

Posición: 32/83

Martínez F, Racca A, Rodríguez I, Polyzos NP.

Ovarian stimulation for oocyte donation: a systematic review and meta-analysis.

Hum Reprod Update. 2021 Jun 22;27(4):673-696. doi: 10.1093/humupd/dmab008.

BACKGROUND: Since its introduction in the 1980s, oocyte donation (OD) has been largely integrated into ART. Lately, both demand and the indications for OD have increased greatly. Oocyte donors are healthy and potentially fertile women undergoing voluntarily ovarian stimulation (OS). Selection of the optimal type of stimulation is of paramount importance in order to achieve the most favourable outcomes for the oocyte recipients, but most importantly for the safety of the oocyte donors. **OBJECTIVE AND RATIONALE:** This is the first systematic review (SR) with the objective to summarize the current evidence on OS in oocyte donors. The scope of this SR was to evaluate the OD programme by assessing four different aspects: how to assess the ovarian response prior to stimulation; how to plan the OS (gonadotrophins; LH suppression; ovulation trigger; when to start OS); how to control for the risk of ovarian hyperstimulation syndrome (OHSS) and other complications; and the differences between the use of fresh versus vitrified donated oocytes. **SEARCH METHODS:** A systematic literature search was conducted in May 2020, according to PRISMA guidelines in the databases PubMed and Embase, using a string that combined synonyms for oocytes, donation, banking, freezing, complications and reproductive outcomes. Studies reporting on the safety and/or efficacy of OS in oocyte donors were identified. The quality of the included studies was assessed using ROBINS-I and ROB2. Meta-analysis was performed where appropriate. Data were combined to calculate mean differences (MD) for continuous variables and odd ratios (OR) for binary data with their corresponding 95% CIs. Heterogeneity between the included studies was assessed using I² and tau statistics. **OUTCOMES:** In total, 57 manuscripts were selected for the review, out of 191 citations identified. Antral follicle count and anti-Müllerian hormone levels correlate with ovarian response to OS in OD but have limited value to discriminate donors who are likely to show either impaired or excessive response. Five randomized controlled trials compared different type of gonadotrophins as part of OS in oocyte donors; owing to high heterogeneity, meta-analysis was precluded. When comparing different types of LH control, namely GnRH antagonist versus agonist, the studies showed no differences in ovarian response. Use of progesterone primed ovarian stimulation protocols has been evaluated in seven studies: the evidence has shown little or no difference, compared to GnRH antagonist protocols, in mean number of retrieved oocytes (MD 0.23, [95% CI 0.58-1.05], $n = 2147$; 6 studies; I² = 13%, $P = 0.33$) and in clinical pregnancy rates among recipients (OR 0.87 [95% CI 0.60-1.26], $n = 2260$, I² = 72%, $P < 0.01$). There is insufficient evidence on long-term safety for babies born. GnRH agonist triggering is the gold standard and should be used in all oocyte donors, given the excellent oocyte retrieval rates, the practical elimination of OHSS and no differences in pregnancy rates in recipients (four studies, OR 0.86, 95%CI 0.58-1.26; I² = 0%). OS in OD is a safe procedure with a low rate of hospitalization after oocyte retrieval. The use of a levonorgestrel

intrauterine device or a progestin contraceptive pill during OS does not impact the number of oocytes retrieved or the clinical pregnancy rate in recipients. Ultrasound monitoring seems enough for an adequate follow up of the stimulation cycle in OD. Use of fresh versus vitrified donated oocytes yielded similar pregnancy outcomes. **WIDER IMPLICATIONS:** This update will be helpful in the clinical management of OS in OD based on the most recent knowledge and recommendations, and possibly in the management of women under 35 years undergoing oocyte vitrification for social freezing, owing to the population similarities. More clinical research is needed on OS protocols that are specifically designed for OD, especially in term of the long-term safety for newborns, effective contraception during OS, and treatment satisfaction.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 15.610 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 1/30; Obstetrics & Gynecology 1/83

Montoya-Botero P, Martínez F, Rodríguez-Purata J, Rodríguez I, Coroleu B, Polyzos NP.

Erratum. The effect of type of oral contraceptive pill and duration of use on fresh and cumulative live birth rates in IVF/ICSI cycles.

Hum Reprod. 2021 Mar 18;36(4):1159-1161. doi: 10.1093/humrep/deaa358.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.918 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

Montoya-Botero P, Drakopoulos P, González-Foruria I, Polyzos NP.

Fresh and cumulative live birth rates in mild versus conventional stimulation for IVF cycles in poor ovarian responders: a systematic review and meta-analysis.

Hum Reprod Open. 2021 Feb 14;2021(1):hoaa066. doi: 10.1093/hropen/hoaa066. eCollection 2021.

STUDY QUESTION: Are cumulative and live birth rates (LBRs) comparable in poor ovarian response women treated with different protocols of mild stimulation IVF (i.e. oral compounds, lower doses or shorter treatments) versus conventional IVF? **SUMMARY ANSWER:** Mild ovarian stimulation (MOS) results in comparable outcomes to those of conventional stimulation in poor ovarian response patients with low ovarian reserve. **WHAT IS KNOWN ALREADY:** Several randomized trials and meta-analyses have been published evaluating the role of mild (MOS) versus conventional ovarian stimulation in poor ovarian response patients. Most report a potentially higher safety profile, patient satisfaction and lower costs, suggesting that the higher cycle cancellation rate and fewer oocytes retrieved following MOS does not affect the final reproductive outcome. Additionally, over the last few years, new publications have added data regarding MOS, and shown the possible benefit of a higher oocyte yield which may also improve prognosis in patients with poor ovarian response. **STUDY DESIGN SIZE DURATION:** We conducted a systematic search of relevant randomized controlled trials (RCTs). We searched electronic databases, including MEDLINE, EMBASE, LILACS-BIREME, CINAHL, The Cochrane Library, CENTRAL (Cochrane Register), Web of Science, Scopus, Trip Database and Open Grey, to identify all relevant studies published up to March 2020. We examined trial registries for ongoing trials. No publication-year or language restrictions were adopted. We explored the reference list of all included studies, reviews and abstracts of major scientific meetings. The primary outcomes were cumulative and fresh LBR (CLBR and FLBR) per woman randomized. **PARTICIPANTS/MATERIALS SETTING METHODS:** We included subfertile women undergoing IVF/ICSI characterized as poor responders and compared primary and secondary outcomes between the different protocols of mild stimulation IVF (i.e. oral compounds, lower doses or shorter treatments) and

conventional IVF. We used the PICO (Patients, Intervention, Comparison and Outcomes) model to select our study population. **MAIN RESULTS AND THE ROLE OF CHANCE:** Overall, 15 RCTs were included in the meta-analysis. CLBR and FLBR were comparable between mild versus conventional stimulation (RR 1.15; 95% CI: 0.73 - 1.81; I² = 0%, n = 424, moderate certainty and RR 1.01; 95% CI: 0.97 - 1.04; I² = 0%, n = 1001, low certainty, respectively). No difference was observed either when utilizing oral compounds (i.e. letrozole and clomiphene) or lower doses. Similarly, ongoing pregnancy rate (OPR) and clinical pregnancy rate (CPR) were equivalent when comparing the two groups (RR 1.01; 95% CI: 0.98 - 1.05; I² = 0%, n = 1480, low certainty, and RR 1.00; 95% CI: 0.97 - 1.03; I² = 0%, n = 2355, low certainty, respectively). A significantly lower oocyte yield (mean differences (MD) -0.80; 95% CI: -1.28, -0.32; I² = 83%, n = 2516, very low certainty) and higher rate of cycle cancellation (RR 1.48; 95% CI: 1.08 - 2.02; I² = 62%, n = 2588, low certainty) was observed in the MOS group. **LIMITATIONS REASONS FOR CAUTION:** The overall quality of the included studies was low to moderate. Even though strict inclusion criteria were used, the selected studies were heterogeneous in population characteristics and treatment protocols. We found no differences in CLBR between MOS and COS (95% CI: 0.73 - 1.81.). **WIDER IMPLICATIONS OF THE FINDINGS:** MOS could be considered as a treatment option in low prognosis poor responder patients, given that it results in similar fresh and CLBRs compared with COS. A milder approach is associated with a lower number of oocytes retrieved and a higher cancellation rate, although treatment cost is significantly reduced. Future research should focus on which type of ovarian stimulation may be of benefit in better prognosis women. **STUDY FUNDING/COMPETING INTERESTS:** There were no sources of financial support. N.P.P. received research grants, honoraria for lectures from: Merck Serono, MSD, Ferring Pharmaceuticals, Besins International, Roche Diagnostics, IBSA, Theramex and Gedeon Richter. P.D. received unrestricted grants and honoraria from Merck Serono, MSD and Ferring Pharmaceuticals. I.G.F. received unrestricted grants and honoraria from Merck Serono, MSD, Ferring Pharmaceuticals, Gedeon-Richter and IBSA. P.M.B. reported no conflict of interest. TRIAL REGISTRATION NUMBER: CRD42020167260.

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Indexado en: PubMed

Neves AR, Montoya-Botero P, Polyzos NP.

The Role of Androgen Supplementation in Women With Diminished Ovarian Reserve:

Time to Randomize, Not Meta-Analyze.

Front Endocrinol (Lausanne). 2021 May 17;12:653857. doi: 10.3389/fendo.2021.653857. eCollection 2021.

The management of patients with diminished ovarian reserve (DOR) remains one of the most challenging tasks in IVF clinical practice. Despite the promising results obtained from animal studies regarding the importance of androgens on folliculogenesis, the evidence obtained from clinical studies remains inconclusive. This is mainly due to the lack of an evidence-based methodology applied in the available trials and to the heterogeneity in the inclusion criteria and IVF treatment protocols. In this review, we analyze the available evidence obtained from animal studies and highlight the pitfalls from the clinical studies that prevent us from closing the chapter of this line of research.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 5.555

Quartil: 1

Categoría: Endocrinology & Metabolism

Posición: 32/145

Neves AR, Santos-Ribeiro S, **García-Martínez S**, **Devesa M**, Soares SR, García-Velasco JA, Garrido N, **Polyzos NP**. **The effect of late-follicular phase progesterone elevation on embryo ploidy and cumulative live birth rates.** *Reprod Biomed Online*. 2021 Aug 6:S1472-6483(21)00362-X. doi: 10.1016/j.rbmo.2021.07.019. Online ahead of print.

RESEARCH QUESTION: Does late-follicular phase progesterone elevation have a deleterious effect on embryo euploidy, blastocyst formation rate and cumulative live birth rates (CLBR)? **DESIGN:** A multicentre retrospective cross-sectional study including infertile patients aged 18-40 years who underwent ovarian stimulation in a gonadotrophin-releasing hormone antagonist protocol and preimplantation genetic testing for aneuploidies (PGT-A) followed by a freeze-all strategy and euploid embryo transfer between August 2017 and December 2019. The sample was stratified according to the progesterone concentrations on the day of trigger: normal (≤ 1.50 ng/ml) and high (> 1.50 ng/ml). Moreover, sensitivity analyses were performed to determine whether different conclusions would have been drawn if different cut-offs had been adopted. The primary outcome was the embryo euploidy rate. Secondary outcomes were the blastocyst formation rate, the number of euploid blastocysts and CLBR. **RESULTS:** Overall 1495 intracytoplasmic sperm injection PGT-A cycles were analysed. Late-follicular phase progesterone elevation was associated with significantly higher late-follicular oestradiol concentrations (2847.56 ± 1091.10 versus 2240.94 ± 996.37 pg/ml, $P < 0.001$) and significantly more oocytes retrieved (17.67 ± 8.86 versus 12.70 ± 7.00 , $P < 0.001$). The number of euploid embryos was significantly higher in the progesterone elevation group (2.32 ± 1.74 versus 1.86 ± 1.42 , $P = 0.001$), whereas the blastocyst formation rate (47.1% [43.7-50.5%] versus 51.0% [49.7-52.4%]), the embryo euploidy rate (48.3% [44.9-51.7%] versus 49.1% [47.7-50.6%]), the live birth rate in the first frozen embryo transfer (34.1% versus 31.1%, $P = 0.427$) and CLBR (38.9% versus 37.0%, $P = 0.637$) were not significantly different between the two groups. **CONCLUSIONS:** Euploidy rate and CLBR do not significantly differ among PGT-A cycles with and without late-follicular progesterone elevation in a freeze-all approach.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 3.828 Cuartil: 1 Categoría: Obstetrics & Gynecology; Reproductive Biology

Posición: Obstetrics & Gynecology 17/83; Reproductive Biology 11/30 (Q2)

Ojosnegros S, Seriola A, Godeau AL, **Veiga A**.

Embryo implantation in the laboratory: an update on current techniques.

Hum Reprod Update. 2021 Apr 21;27(3):501-530. doi: 10.1093/humupd/dmaa054.

BACKGROUND: The embryo implantation process is crucial for the correct establishment and progress of pregnancy. During implantation, the blastocyst trophoblast cells attach to the epithelium of the endometrium, triggering intense cell-to-cell crosstalk that leads to trophoblast outgrowth, invasion of the endometrial tissue, and formation of the placenta. However, this process, which is vital for embryo and foetal development in utero, is still elusive to experimentation because of its inaccessibility. Experimental implantation is cumbersome and impractical in adult animal models and is inconceivable in humans. **OBJECTIVE AND RATIONALE:** A number of custom experimental solutions have been proposed to recreate different stages of the implantation process in vitro, by combining a human embryo (or a human embryo surrogate) and endometrial cells (or a surrogate for the endometrial tissue). In vitro models allow rapid high-throughput interrogation of embryos and cells, and efficient screening of molecules, such as cytokines, drugs, or transcription factors, that control embryo implantation and the receptivity of the endometrium. However, the broad selection of available in vitro systems makes it complicated to decide which system best fits the needs of a specific experiment or scientific question. To orient the reader, this review will explore the experimental options proposed in the literature, and classify them into amenable categories based on the embryo/cell pairs employed. The goal is to give an overview of the tools available to study the complex process of human embryo implantation, and

explain the differences between them, including the advantages and disadvantages of each system.**SEARCH METHODS:** We performed a comprehensive review of the literature to come up with different categories that mimic the different stages of embryo implantation in vitro, ranging from initial blastocyst apposition to later stages of trophoblast invasion or gastrulation. We will also review recent breakthrough advances on stem cells and organoids, assembling embryo-like structures and endometrial tissues.**OUTCOMES:** We highlight the most relevant systems and describe the most significant experiments. We focus on in vitro systems that have contributed to the study of human reproduction by discovering molecules that control implantation, including hormones, signalling molecules, transcription factors and cytokines.**WIDER IMPLICATIONS:** The momentum of this field is growing thanks to the use of stem cells to build embryo-like structures and endometrial tissues, and the use of bioengineering to extend the life of embryos in culture. We propose to merge bioengineering methods derived from the fields of stem cells and reproduction to develop new systems covering a wider window of the implantation process.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 15.610 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 1/30; Obstetrics & Gynecology 1/83

Peguero A, Herraiz I, Perales A, Melchor JC, Melchor I, Marcos B, Villalain C, Martinez-Portilla R, Mazarico E, **Meler E**, Hernandez S, Matas I, Del Rio M, Galindo A, Figueras F.

Placental growth factor testing in the management of late preterm preeclampsia without severe features: a multicenter, randomized, controlled trial.

Am J Obstet Gynecol. 2021 Sep;225(3):308.e1-308.e14. doi: 10.1016/j.ajog.2021.03.044.

BACKGROUND: In women with late preterm preeclampsia, the optimal time for delivery remains a controversial topic, because of the fine balance between the maternal benefits from early delivery and the risks for prematurity. It remains challenging to define prognostic markers to identify women at highest risk for complications, in which case a selective, planned delivery may reduce the adverse maternal and perinatal outcomes.**OBJECTIVE:** This trial aimed to determine whether using an algorithm based on the maternal levels of placental growth factor in women with late preterm preeclampsia to evaluate the best time for delivery reduced the progression to preeclampsia with severe features without increasing the adverse perinatal outcomes.**STUDY DESIGN:** This parallel-group, open-label, multicenter, randomized controlled trial was conducted at 7 maternity units across Spain. We compared selective planned deliveries based on maternal levels of placental growth factor at admission (revealed group) and expectant management under usual care (concealed group) with individual randomization in singleton pregnancies with late preterm preeclampsia from 34 to 36+6 weeks' gestation. The coprimary maternal outcome was the progression to preeclampsia with severe features. The coprimary neonatal outcome was morbidity at infant hospital discharge with a noninferiority hypothesis (noninferiority margin of 10% difference in incidence). Analyses were conducted according to intention-to-treat.**RESULTS:** Between January 1, 2016, and December 31, 2019, 178 women were recruited. Of those women, 88 were assigned to the revealed group and 90 were assigned to the concealed group. The data analysis was performed before the completion of the required sample size. The proportion of women with progression to preeclampsia with severe features was significantly lower in the revealed group than in the concealed group (adjusted relative risk, 0.5; 95% confidence interval, 0.33-0.76; P=.001). The proportion of infants with neonatal morbidity was not significantly different between groups (adjusted relative risk, 0.77; 95% confidence interval, 0.39-1.53; P=.45).**CONCLUSION:** There is evidence to suggest that the use of an algorithm based on placental growth factor levels in women with late preterm preeclampsia leads to a lower rate of progression to preeclampsia with severe features and reduces maternal complications without worsening the neonatal

outcomes. This trade-off should be discussed with women with late preterm preeclampsia to allow shared decision making about the timing of delivery.

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Factor Impacto: 8.661

Quartil: 1

Categoría: Obstetrics & Gynecology

Posición: 2/83

Pérez-Roncero GR, López-Baena MT, **Sánchez-Prieto M**, Chedraui P, Pérez-López FR.

Association of breastfeeding duration with carotid intima-media thickness in later life: a systematic review and meta-analysis.

Gynecol Endocrinol. 2021 May 25:1-7. doi: 10.1080/09513590.2021.1925244. Online ahead of print.

OBJECTIVE: To assess the relationship of breastfeeding duration with maternal ultrasound carotid intima-media thickness (CIMT) in later life. **METHODS:** PubMed, Scopus, Web of Science, Embase, and Cochrane Central database searching up to December 15, 2020, for eligible studies that reported on the breastfeeding duration and ultrasound measurement of CIMT in later life. The exposed group corresponded to breastfeeding duration \geq 6 months whereas the control group was women with breastfeeding of shorter duration or nil breastfeeding. The methodological quality of reviewed articles was appraised using the Newcastle-Ottawa Scale (NOS). Results are reported as the mean difference (MD) or the standardized MD (SMD) and their 95% confidence intervals (CIs). The study was registered in the PROSPERO database. **RESULTS:** Of 532 unique studies, three studies met inclusion criteria including 1721 women with a mean age ranging between 36.6 ± 6.9 and 55.7 ± 5.3 years, comparing breastfeeding duration \geq 6 months versus 1-5 months (NOS: 7-8). Common CIMT was lower in women who breastfed for a longer duration (SMD = -0.10, 95% CI -0.20 to -0.00). Circulating HDL-cholesterol was higher in women with longer breastfeeding duration (MD = 3.25, 95% CI 0.88-5.61). There were no significant differences for total cholesterol, LDL-cholesterol, triglycerides, glucose, and blood pressure between breastfeeding 6 or more months and the control group. **CONCLUSIONS:** The available studies showed lower CIMT and higher HDL-cholesterol levels in women who breastfed for 6 or more months as compared to controls.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 2.260

Quartil: 3

Categoría: Obstetrics & Gynecology; Endocrinology & Metabolism

Posición: Obstetrics & Gynecology 54/83; Endocrinology & Metabolism 127/146 (Q4)

Pires R(1), **Neves AR**, Gerales F, Águas F.

Innovating the conservative management of isolated cervical aplasia.

BMJ Case Rep. 2021 Oct 27;14(10):e242475. doi: 10.1136/bcr-2021-242475.

Isolated cervical aplasia (ESHRE/ESGE U0C4V0) is a rare condition with an incidence of approximately 1:100,000 births. This congenital malformation of the female genital tract represents an impairment of the outflow tract and is an inevitable cause of infertility. Patients usually present with pelvic pain or haematometra and surgical treatment is needed. Conservative management is the first line of approach, allowing for future fertility. However, complications are not negligible. Choosing the best surgical technique remains controversial as few follow-up studies have been published. We describe a case report of isolated cervical aplasia diagnosed in a 16-year-old patient, managed by a canalisation procedure using a Foley catheter. Following failure of this approach, a levonorgestrel intrauterine system was inserted, which remained efficient after 4 years. This case adds to the few reports of success in the management of this challenging clinical entity and might guide clinicians to avoid non-conservative approaches in young patients.

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Indexado en: PubMed

Polyzos NP, Popovic Todorovic B.

Reply: The evergreen conundrum of poor response: is the dose really irrelevant?

Hum Reprod. 2021 Mar 18;36(4):1157-1158. doi: 10.1093/humrep/deab005.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.918

Quartil: 1

Categoria: Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

Polyzos NP, Neves AR, Drakopoulos P, Spits C, Alvaro Mercadal B, **Garcia S**, Ma PQM, Le LH, Ho MT, Mertens J, Stoop D, Tournaye H, Vuong NL.

The effect of polymorphisms in FSHR and FSHB genes on ovarian response: a prospective multicenter multinational study in Europe and Asia.

Hum Reprod. 2021 May 17;36(6):1711-1721. doi: 10.1093/humrep/deab068.

STUDY QUESTION: Does the presence of single nucleotide polymorphisms (SNPs) in the FSH receptor gene (FSHR) and/or FSH beta subunit-encoding gene (FSHB) influence ovarian response in predicted normal responders treated with rFSH? **SUMMARY ANSWER:** The presence of FSHR SNPs (rs6165, rs6166, rs1394205) has a statistically significant impact in ovarian response, although this effect is of minimal clinical relevance in predicted normal responders treated with a fixed dose of 150 IU rFSH. **WHAT IS KNOWN ALREADY:** Ovarian reserve markers have been a breakthrough in response prediction following ovarian stimulation. However, a significant percentage of patients show a disproportionate lower ovarian response, as compared with their actual ovarian reserve. Studies on pharmacogenetics have demonstrated a relationship between FSHR or FSHB genotyping and drug response, suggesting a potential effect of individual genetic variability on ovarian stimulation. However, evidence from these studies is inconsistent, due to the inclusion of patients with variable ovarian reserve, use of different starting gonadotropin doses, and allowance for dose adjustments during treatment. This highlights the necessity of a well-controlled prospective study in a homogenous population treated with the same fixed protocol. **STUDY DESIGN, SIZE, DURATION:** We conducted a multicenter multinational prospective study, including 368 patients from Vietnam, Belgium, and Spain (168 from Europe and 200 from Asia), from November 2016 until June 2019. All patients underwent ovarian stimulation followed by oocyte retrieval in an antagonist protocol with a fixed daily dose of 150 IU rFSH until triggering. Blood sampling and DNA extraction was performed prior to oocyte retrieval, followed by genotyping of four SNPs from FSHR (rs6165, rs6166, rs1394205) and FSHB (rs10835638). **PARTICIPANTS/MATERIALS, SETTING, METHODS:** Eligible were predicted normal responder women <38 years old undergoing their first or second ovarian stimulation cycle. Laboratory staff and clinicians were blinded to the clinical results and genotyping, respectively. The prevalence of hypo-responders, the number of oocytes retrieved, the follicular output rate (FORT), and the follicle to oocyte index (FOI) were compared between different FSHR and FSHB SNPs genotypes. **MAIN RESULTS AND THE ROLE OF CHANCE:** The prevalence of derived allele homozygous SNPs in the FSHR was rs6166 (genotype G/G) 15.8%, rs6165 (genotype G/G) 34.8%, and rs1394205 (genotype A/A) 14.1%, with significant differences between Caucasian and Asian women ($P < 0.001$). FSHB variant rs10835638 (c.-211 G>T) was very rare (0.5%). Genetic model analysis revealed that the presence of the G allele in FSHR variant rs6166 resulted in less oocytes retrieved when compared to the AA genotype (13.54 ± 0.46 vs 14.81 ± 0.61 , estimated mean difference (EMD) -1.47 (95% CI -2.82 to -0.11)). In FSHR variant rs1394205, a significantly lower number of oocytes was retrieved in patients with an A allele when compared to G/G (13.33 ± 0.41 vs 15.06 ± 0.68 , EMD -1.69 (95% CI -3.06 to -0.31)). A significantly higher prevalence of hypo-responders was found in patients with the genotype A/G for FSHR variant rs6166 (55.9%, $n = 57$) when compared to A/A (28.4%, $n = 29$), ORadj 1.87 (95% CI 1.08-3.24). No significant differences were found regarding the FORT across the genotypes for FSHR variants rs6166, rs6165, or rs1394205. Regarding the FOI, the presence of the G allele for FSHR variant rs6166 resulted in a lower FOI when compared to the A/A genotype, EMD -13.47 (95% CI -22.69 to -4.24). Regarding

FSHR variant rs6165, a lower FOI was reported for genotype A/G (79.75 ± 3.35) when compared to genotype A/A (92.08 ± 6.23), EMD -13.81 (95% CI -25.41 to -2.21). **LIMITATIONS, REASONS FOR CAUTION:** The study was performed in relatively young women with normal ovarian reserve to eliminate biases related to age-related fertility decline; thus, caution is needed when extrapolating results to older populations. In addition, no analysis was performed for FSHB variant rs10835638 due to the very low prevalence of the genotype T/T ($n = 2$). **WIDER IMPLICATIONS OF THE FINDINGS:** Based on our results, genotyping FSHR SNPs rs6165, rs6166, rs1394205, and FSHB SNP rs10835638 prior to initiating an ovarian stimulation with rFSH in predicted normal responders should not be recommended, taking into account the minimal clinical impact of such information in this population. Future research may focus on other populations and other genes related to folliculogenesis or steroidogenesis. **STUDY FUNDING/COMPETING INTEREST(S):** This study was supported by an unrestricted grant by Merck Sharp & Dohme (MSD). N.P.P. reports grants and/or personal fees from MSD, Merck Serono, Roche Diagnostics, Ferring International, Besins Healthcare, Gedeon Richter, Theramex, and Institut Biochimique SA (IBSA). N.L.V. and M.T.H. report consultancy and conference fees from Merck, Ferring, and MSD, outside the submitted work. P.D. has received honoraria for lecturing and/or research grants from MSD, Ferring International, and Merck. D.S. reports grants and/or personal fees from MSD, Ferring International, Merck Serono, Cook, and Gedeon Richter. A.R.N., B.A.M., C.S., J.M., L.H.L., P.Q.M.M., H.T., and S.G. report no conflict of interests. TRIAL REGISTRATION NUMBER: NCT03007043.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.918 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

Racca A, Vanni VS, Somigliana E, Reschini M, Viganò P, Santos-Ribeiro S, Drakopoulos P, Tournaye H, Verheyen G, Papaleo E, Candiani M, Blockeel C.

Is a freeze-all policy the optimal solution to circumvent the effect of late follicular elevated progesterone? A multicentric matched-control retrospective study analysing cumulative live birth rate in 942 non-elective freeze-all cycles.

Hum Reprod. 2021 Aug 18;36(9):2463-2472. doi: 10.1093/humrep/deab160.

STUDY QUESTION: Is late follicular elevated progesterone (LFEP) in the fresh cycle hindering cumulative live birth rates (CLBRs) when a freeze only strategy is applied? **SUMMARY ANSWER:** LFEP in the fresh cycle does not affect the CLBR of the frozen transfers in a freeze only approach, nor the embryo freezing rate. **WHAT IS KNOWN ALREADY:** Ovarian stimulation promotes the production of progesterone (P) which has been demonstrated to have a deleterious effect on IVF outcomes. While there is robust evidence that this elevation produces impaired endometrial receptivity, the impact on embryo quality remains a matter of debate. In particular, previous studies have shown that LFEP is associated with a hindered CLBR. However, most clinical insight on the effect of progesterone on embryo quality in terms of CLBRs have focused on embryo transfers performed after the fresh transfer, thus excluding the first embryo of the cohort. To be really informative on the possible detrimental effects of LFEP, evidence should be derived from freeze-all cycles where no fresh embryo transfer is performed in the presence of progesterone elevation, and the entire cohort of embryos is cryopreserved. **STUDY DESIGN, SIZE, DURATION:** This was a matched case-control, multicentre (three centres), retrospective analysis including all GnRH antagonist ICSI cycles in which a freeze all (FA) policy of embryos on day 3/5/6 of embryonic development was applied between 2012 and 2018. A total of 942 patients (471 cases with elevated P and 471 matched controls with normal P values) were included in the analysis. Each patient was included only once. **PARTICIPANTS/MATERIALS, SETTING, METHODS:** The sample was divided according to the following P levels on the day of ovulation triggering: <1.50 ng/ml and ≥ 1.50 ng/ml. The matching of the controls

was performed according to age (± 1 year) and number of oocytes retrieved ($\pm 10\%$). The main outcome was CLBR defined as a live-born delivery after 24 weeks of gestation. **MAIN RESULTS AND THE ROLE OF CHANCE:** The baseline characteristics of the two groups were similar. Estradiol levels on the day of trigger were significantly higher in the elevated P group. There was no significant difference in terms of fertilisation rate between the two groups. The elevated P group had significantly more cleavage stage frozen embryos compared to the normal P group while the total number of cryopreserved blastocyst stage embryos was the same. The CLBR did not differ between the two study groups (29.3% and 28.2% in the normal versus LFEP respectively, $P = 0.773$), also following confounder adjustment using multivariable GEE regression analysis (accounting for age at oocyte retrieval, total dose of FSH, progesterone levels on the day of ovulation trigger, day of freezing, at least one top-quality embryo transferred and number of previous IVF cycles, as the independent variables). **LIMITATIONS, REASONS FOR CAUTION:** This is a multicentre observational study based on a retrospective data analysis. Better extrapolation of the results could be validated by performing a prospective analysis. **WIDER IMPLICATIONS OF THE FINDINGS:** This is the first study demonstrating that LFEP in the fresh cycle does not hinder CLBR of the subsequent frozen cycles in a FA approach. Thus, a FA strategy circumvents the issue of elevated P in the late follicular phase. **STUDY FUNDING/COMPETING INTEREST(S):** No funding was received for this study. Throughout the study period and manuscript preparation, authors were supported by departmental funds from: Centre for Reproductive Medicine, Brussels, Belgium; Infertility Unit, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan, Italy; Centro Scienze Natalità, San Raffaele Scientific Institute, Milan, Italy; and IVI-RMA, Lisbon, Portugal. E.S. has competing interests with Ferring, Merck-Serono, Theramex and Gedeon-Richter outside the submitted work. E.P. reports grants from Ferring, grants and personal fees from Merck-Serono, grants and personal fees from MSD and grants from IBSA outside the submitted work. All the other authors have no conflicts of interest to declare. TRIAL REGISTRATION NUMBER: N/A.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.918 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

Racca A, Polyzos NP.

DuoStim: are we really comparing follicular phase with luteal phase stimulations?

Hum Reprod. 2021 May 17;36(6):1722-1723. doi: 10.1093/humrep/deab017.

Comment in

Hum Reprod. 2021 May 17;36(6):1723-1724.

Comment on

Hum Reprod. 2020 Nov 1;35(11):2598-2608.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.918 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

Sánchez-Borrego R, **Sánchez-Prieto M.**

What are the mechanisms of action of the different contraceptive methods to reduce the risk of ovarian cancer?

Eur J Contracept Reprod Health Care. 2021 Feb;26(1):79-84. doi: 10.1080/13625187.2020.1849617. Epub 2020 Nov 27.

OBJECTIVE: Ovarian cancer (OvCa) is the deadliest gynaecologic malignancy. Knowing that OvCa, as a disease, has different origins has allowed us to relate them to the mechanisms of action of different contraceptive methods with the aim of evaluating the possibility of their use in reducing risk. **STUDY DESIGN:** This commentary review article will instead focus on the recent findings on the role of contraceptive methods in preventing of OvCa. **RESULTS:** Combined hormonal contraceptive (CHC) use is an effective method of chemoprevention for OvCa in the general population and in women with genetic disorders. Salpingectomy, better than tubal ligation, should be offered for ovarian/tubal/peritoneal cancer prevention. Progestogen-only methods can decrease the risk of OvCa via reduced menstrual bleeding and by changes in the hormonal environment that surrounds the ovary. IUDs of any type, through different mechanisms, decrease the risk of OvCa. Barrier methods prevent the passage of germs into the tubes and ovaries and the inflammatory state they produce. **CONCLUSIONS:** Most contraceptive methods have a mechanism of action that may favour a reduction in the risk of OvCa. The theories of incessant ovulation, retrograde menstruation, and that the fallopian tubes are the site of origin of a proportion of high-grade serous OvCa, have led to the recommendation that anovulatory methods, those that decrease menstrual bleeding, and those that blocked tubes, or even better, 'opportunistic salpingectomy' are a current approach to prevent OvCa in the population general and, above all, in the population at risk.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 1.848 **Quartil:** 3 **Categoría:** Public, Environmental & Occupational Health; Obstetrics & Gynecology

Posición: Public, Environmental & Occupational Health 149/203; Obstetrics & Gynecology 67/83 (Q4)

Sánchez-Prieto M, Fargas F, Tresserra F, González-Cao M, Baulies S, Fábregas R.

Surgical Management of Vulvar Melanoma: A Case Series.

Case Rep Oncol. 2021 Jul 20;14(2):1144-1151. doi: 10.1159/000517820. eCollection 2021 May-Aug.

Vulvar malignant melanoma is the second most common subtype of vulvar cancer, accounting for 5-10% of all vulvar cancers. The prognosis is still very poor, although some advances have been achieved in the last years. One of the most significant changes in its management has been the development of less invasive surgical techniques that diminish the risk of postoperative morbidity and long-lasting sequelae. In this article, we review the surgical management of the pathology, based on the comment of 3 cases with vulvar melanoma treated at our institution.

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Indexado en: PubMed/WOS/JCR/ JCI/ JCI/Emerging sources Citation Index (ESCI)

Journal Citation Index: 0.20

Quartil: 4

Categoría: Oncology

Posición: 271/309

Santos-Ribeiro S, Mackens S, Popovic-Todorovic B, **Racca A, Polyzos NP,** Van Landuyt L, Drakopoulos P, de Vos M, Tournaye H, Blockeel C.

The freeze-all strategy versus agonist triggering with low-dose hCG for luteal phase support in IVF/ICSI for high responders: a randomized controlled trial.

Hum Reprod. 2020 Dec 1;35(12):2808-2818. doi: 10.1093/humrep/deaa226.

Comment in

Hum Reprod. 2020 Dec 1;35(12):2660-2662.

STUDY QUESTION: Does the freeze-all strategy in high-responders increase pregnancy rates and improve safety outcomes when compared with GnRH agonist triggering followed by low-dose hCG intensified luteal support with a fresh embryo transfer?**SUMMARY ANSWER:** Pregnancy rates after either fresh embryo transfer with intensified luteal phase support using low-dose hCG or the freeze-all strategy did not vary significantly;

however, moderate-to-severe ovarian hyperstimulation syndrome (OHSS) occurred more frequently in the women who attempted a fresh embryo transfer. **WHAT IS KNOWN ALREADY:** Two strategies following GnRH agonist triggering (the freeze-all approach and a fresh embryo transfer attempt using a low-dose of hCG for intensified luteal phase support) are safer alternatives when compared with conventional hCG triggering with similar pregnancy outcomes. However, these two strategies have never been compared head-to-head in an unrestricted predicted hyper-responder population. **STUDY DESIGN, SIZE, DURATION:** This study included women with an excessive response to ovarian stimulation (≥ 18 follicles measuring ≥ 11 mm) undergoing IVF/ICSI in a GnRH antagonist suppressed cycle between 2014 and 2017. Our primary outcome was clinical pregnancy at 7 weeks after the first embryo transfer. Secondary outcomes included live birth and the development of moderate-to-severe OHSS. **PARTICIPANTS/MATERIALS, SETTING, METHODS:** Following GnRH agonist triggering, women were randomized either to cryopreserve all good-quality embryos followed by a frozen embryo transfer in an subsequent artificial cycle or to perform a fresh embryo transfer with intensified luteal phase support (1500 IU hCG on the day of oocyte retrieval, plus oral estradiol 2 mg two times a day, plus 200 mg of micronized vaginal progesterone three times a day). **MAIN RESULTS AND THE ROLE OF CHANCE:** A total of 212 patients (106 in each arm) were recruited in the study, with three patients (one in the fresh embryo transfer group and two in the freeze-all group) later withdrawing their consent to participate in the study. One patient in the freeze-all group became pregnant naturally (clinical pregnancy diagnosed 38 days after randomization) prior to the first frozen embryo transfer. The study arms did not vary significantly in terms of the number of oocytes retrieved and embryos produced/transferred. The intention to treat clinical pregnancy and live birth rates (with the latter excluding four cases lost to follow-up: one in the fresh transfer and three in the freeze-all arms, respectively) after the first embryo transfer did not vary significantly among the fresh embryo transfer and freeze-all study arms: 51/105 (48.6%) versus 57/104 (54.8%) and 41/104 (39.4%) versus 42/101 (41.6%), respectively (relative risk for clinical pregnancy 1.13, 95% CI 0.87-1.47; $P = 0.41$). However, moderate-to-severe OHSS occurred solely in the group that received low-dose hCG (9/105, 8.6%, 95% CI 3.2% to 13.9% vs 0/104, 95% CI 0 to 3.7, $P < 0.01$). **LIMITATIONS, REASONS FOR CAUTION:** The sample size calculation was based on a 19% absolute difference in terms of clinical pregnancy rates, therefore smaller differences, as observed in the trial, cannot be reliably excluded as non-significant. **WIDER IMPLICATIONS OF THE FINDINGS:** This study offers the first comparative analysis of two common strategies applied to women performing IVF/ICSI with a high risk to develop OHSS. While pregnancy rates did not vary significantly, a fresh embryo transfer with intensified luteal phase support may still not avoid the risk of moderate-to-severe OHSS and serious consideration should be made before recommending it as a routine first-line treatment. Future trials may allow us to confirm these findings. **STUDY FUNDING/COMPETING INTEREST(S):** The authors have no conflicts of interest to disclose. No external funding was obtained for this study. **TRIAL REGISTRATION NUMBER:** ClinicalTrials.gov identifier NCT02148393. **TRIAL REGISTRATION DATE:** 28 May 2014. **DATE OF FIRST PATIENT'S ENROLMENT:** 30 May 2014.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.918 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

Sladkevicius P, Jokubkiene L, Timmerman D, Fischerova D, Van Holsbeke C, Franchi D, Savelli L, Epstein E, Fruscio R, Kaijser J, Czekierdowski A, Guerriero S, **Pascual MA**, Testa AC, Ameye L, Valentin L.

Vessel morphology depicted by three-dimensional power Doppler ultrasound as second-stage test in adnexal tumors that are difficult to classify: prospective diagnostic accuracy study.

Ultrasound Obstet Gynecol. 2021 Feb;57(2):324-334. doi: 10.1002/uog.22191.

OBJECTIVES: To assess whether vessel morphology depicted by three-dimensional (3D) power Doppler ultrasound improves discrimination between benignity and malignancy if used as a second-stage test in adnexal masses that are difficult to classify. **METHODS:** This was a prospective observational international multicenter diagnostic accuracy study. Consecutive patients with an adnexal mass underwent standardized transvaginal two-dimensional (2D) grayscale and color or power Doppler and 3D power Doppler ultrasound examination by an experienced examiner, and those with a 'difficult' tumor were included in the current analysis. A difficult tumor was defined as one in which the International Ovarian Tumor Analysis (IOTA) logistic regression model-1 (LR-1) yielded an ambiguous result (risk of malignancy, 8.3% to 25.5%), or as one in which the ultrasound examiner was uncertain regarding classification as benign or malignant when using subjective assessment. Even when the ultrasound examiner was uncertain, he/she was obliged to classify the tumor as most probably benign or most probably malignant. For each difficult tumor, one researcher created a 360° rotating 3D power Doppler image of the vessel tree in the whole tumor and another of the vessel tree in a 5-cm³ spherical volume selected from the most vascularized part of the tumor. Two other researchers, blinded to the patient's history, 2D ultrasound findings and histological diagnosis, independently described the vessel tree using predetermined vessel features. Their agreed classification was used. The reference standard was the histological diagnosis of the mass. The sensitivity of each test for discriminating between benign and malignant difficult tumors was plotted against 1 - specificity on a receiver-operating-characteristics diagram, and the test with the point furthest from the reference line was considered to have the best diagnostic ability. **RESULTS:** Of 2403 women with an adnexal mass, 376 (16%) had a difficult mass. Ultrasound volumes were available for 138 of these cases. In 79/138 masses, the ultrasound examiner was uncertain about the diagnosis based on subjective assessment, in 87/138, IOTA LR-1 yielded an ambiguous result and, in 28/138, both methods gave an uncertain result. Of the masses, 38/138 (28%) were malignant. Among tumors that were difficult to classify as benign or malignant by subjective assessment, the vessel feature 'densely packed vessels' had the best discriminative ability (sensitivity 67% (18/27), specificity 83% (43/52)) and was slightly superior to subjective assessment (sensitivity 74% (20/27), specificity 60% (31/52)). In tumors in which IOTA LR-1 yielded an ambiguous result, subjective assessment (sensitivity 82% (14/17), specificity 79% (55/70)) was superior to the best vascular feature, i.e. changes in the diameter of vessels in the whole tumor volume (sensitivity 71% (12/17), specificity 69% (48/70)). **CONCLUSION:** Vessel morphology depicted by 3D power Doppler ultrasound may slightly improve discrimination between benign and malignant adnexal tumors that are difficult to classify by subjective ultrasound assessment. For tumors in which the IOTA LR-1 model yields an ambiguous result, subjective assessment is superior to vessel morphology as a second-stage test. © 2020 The Authors. Ultrasound in Obstetrics & Gynecology published by John Wiley & Sons Ltd on behalf of International Society of Ultrasound in Obstetrics and Gynecology.

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Factor Impacto: 7.299 **Quartil:** 1 **Categoría:** Acoustics; Radiology; Nuclear Medicine & Medical Imaging

Posición: Radiology, Nuclear Medicine & Medical Imaging 10/134; Acoustics 2/32

Sokol P, Drakopoulos P, Polyzos NP.

The Effect of Ejaculatory Abstinence Interval on Sperm Parameters and Clinical Outcome of ART. A Systematic Review of the Literature.

J Clin Med. 2021 Jul 21;10(15):3213. doi: 10.3390/jcm10153213.

Since the publication of the first edition of the WHO (World Health Organization) Laboratory Manual for the examination of Human Semen in 1980, the reference values of sperm parameters have been updated on four occasions. Currently and globally, most of the laboratories analyzing semen samples use the latest, 5th edition of the manual that recommends ejaculatory abstinence from two to seven days before producing the sample for examination. While this standardized interval of time facilitates the interpretation of the results and research,

no solid evidence exists to support the WHO-recommended abstinence time for a semen analysis in order to optimize clinical outcomes after assisted reproduction. Most of the studies refer to different clinical outcomes, different groups of patients and different editions of the WHO Laboratory Manual, including heterogeneous intervals of abstinence or sperm parameters. The aim of the current systematic review was to evaluate available evidence correlating ejaculatory abstinence time with clinical outcomes and sperm parameters analyzed according to the last edition of the World Health Organization Laboratory Manual reference values in different male populations. The results from the included studies indicate that WHO abstinence recommendations may need revision, given that a shorter ejaculatory abstinence interval appears to be associated with improved sperm parameters, such as sperm DNA fragmentation, progressive motility or morphology, while evidence suggests a potential increase in embryo euploidy rates and pregnancy outcomes.

Conflict of interest statement: The authors declare no conflict of interest.

Indexado en: PubMed/WOS/JCR /JCI/ Science Citation Index Expanded (SCIE)

Factor Impacto: 4.241

Quartil: 1

Categoría: Medicine, General & Internal

Posición: 39/169

Susak H, Serra-Saurina L, Demidov G, Rabionet R, Domènech L, Bosio M, Muyas F, **Estivill X**, Escaramís G, Ossowski S.

Efficient and flexible Integration of variant characteristics in rare variant association studies using integrated nested Laplace approximation.

PLoS Comput Biol. 2021 Feb 19;17(2):e1007784. doi: 10.1371/journal.pcbi.1007784. eCollection 2021 Feb.

Rare variants are thought to play an important role in the etiology of complex diseases and may explain a significant fraction of the missing heritability in genetic disease studies. Next-generation sequencing facilitates the association of rare variants in coding or regulatory regions with complex diseases in large cohorts at genome-wide scale. However, rare variant association studies (RVAS) still lack power when cohorts are small to medium-sized and if genetic variation explains a small fraction of phenotypic variance. Here we present a novel Bayesian rare variant Association Test using Integrated Nested Laplace Approximation (BATI). Unlike existing RVAS tests, BATI allows integration of individual or variant-specific features as covariates, while efficiently performing inference based on full model estimation. We demonstrate that BATI outperforms established RVAS methods on realistic, semi-synthetic whole-exome sequencing cohorts, especially when using meaningful biological context, such as functional annotation. We show that BATI achieves power above 70% in scenarios in which competing tests fail to identify risk genes, e.g. when risk variants in sum explain less than 0.5% of phenotypic variance. We have integrated BATI, together with five existing RVAS tests in the 'Rare Variant Genome Wide Association Study' (rvGWAS) framework for data analyzed by whole-exome or whole genome sequencing. rvGWAS supports rare variant association for genes or any other biological unit such as promoters, while allowing the analysis of essential functionalities like quality control or filtering. Applying rvGWAS to a Chronic Lymphocytic Leukemia study we identified eight candidate predisposition genes, including EHMT2 and COPS7A.

Indexado en: PubMed/WOS/JCR /JCI/ Science Citation Index Expanded (SCIE)

Factor Impacto: 4.475

Quartil: 1

Categoría: Biochemical Research Methods; Mathematical & Computational Biology

Posición: Biochemical Research Methods 16/78; Mathematical & Computational Biology 8/58

Van Den Bosch T, Verbakel JY, Valentin L, Wynants L, De Cock B, **Pascual MA**, Leone FPG, Sladkevicius P, Alcazar JL, Votino A, Fruscio R, Lanzani C, Van Holsbeke C, Rossi A, Jokubkiene L, Kudla M, Jakab A, Domali E, Epstein E, Van Pachterbeke C, Bourne T, Van Calster B, Timmerman D.

Typical ultrasound features of various endometrial pathologies described using International Endometrial Tumor Analysis (IETA) terminology in women with abnormal uterine bleeding.

Ultrasound Obstet Gynecol. 2021 Jan;57(1):164-172. doi: 10.1002/uog.22109.

OBJECTIVE: To describe the ultrasound features of different endometrial and other intracavitary pathologies in pre- and postmenopausal women presenting with abnormal uterine bleeding, using the International Endometrial Tumor Analysis (IETA) terminology. **METHODS:** This was a prospective observational multicenter study of consecutive women presenting with abnormal uterine bleeding. Unenhanced sonography with color Doppler and fluid-instillation sonography were performed. Endometrial sampling was performed according to each center's local protocol. The histological endpoints were cancer, atypical endometrial hyperplasia/endometrioid intraepithelial neoplasia (EIN), endometrial atrophy, proliferative or secretory endometrium, endometrial hyperplasia without atypia, endometrial polyp, intracavitary leiomyoma and other. For fluid-instillation sonography, the histological endpoints were endometrial polyp, intracavitary leiomyoma and cancer. For each histological endpoint, we report typical ultrasound features using the IETA terminology. **RESULTS:** The database consisted of 2856 consecutive women presenting with abnormal uterine bleeding. Unenhanced sonography with color Doppler was performed in all cases and fluid-instillation sonography in 1857. In 2216 women, endometrial histology was available, and these comprised the study population. Median age was 49 years (range, 19-92 years), median parity was 2 (range, 0-10) and median body mass index was 24.9 kg/m² (range, 16.0-72.1 kg/m²). Of the study population, 843 (38.0%) women were postmenopausal. Endometrial polyps were diagnosed in 751 (33.9%) women, intracavitary leiomyomas in 223 (10.1%) and endometrial cancer in 137 (6.2%). None (0% (95% CI, 0.0-5.5%)) of the 66 women with endometrial thickness < 3 mm had endometrial cancer or atypical hyperplasia/EIN. Endometrial cancer or atypical hyperplasia/EIN was found in three of 283 (1.1% (95% CI, 0.4-3.1%)) endometria with a three-layer pattern, in three of 459 (0.7% (95% CI, 0.2-1.9%)) endometria with a linear endometrial midline and in five of 337 (1.5% (95% CI, 0.6-3.4%)) cases with a single vessel without branching on unenhanced ultrasound. **CONCLUSIONS:** The typical ultrasound features of endometrial cancer, polyps, hyperplasia and atrophy and intracavitary leiomyomas, are described using the IETA terminology. The detection of some easy-to-assess IETA features (i.e. endometrial thickness < 3 mm, three-layer pattern, linear midline and single vessel without branching) makes endometrial cancer unlikely. Copyright © 2020 ISUOG. Published by John Wiley & Sons Ltd.

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Factor Impacto: 7.299

Quartil: 1

Categoría: Acoustics; Radiology; Nuclear Medicine & Medical Imaging

Posición: Radiology, Nuclear Medicine & Medical Imaging 10/134; Acoustics 2/32

Zapardiel I, Alvarez J, Barahona M, **Barri P**, Boldo A, Bresco P, Gasca I, Jaunarena I, Kucukmeti n A, Mancebo G, Otero B, Roldan F, Rovira R, Suarez E, Tejerizo A, Torrent A, Gorostidi M.

Utility of Intraoperative Fluorescence Imaging in Gynecologic Surgery: Systematic Review and Consensus Statement.

Ann Surg Oncol. 2021 Jun;28(6):3266-3278. doi: 10.1245/s10434-020-09222-x. Epub 2020 Oct 23.

BACKGROUND: This study aimed to review the current knowledge on the utility of intraoperative fluorescence imaging in gynecologic surgery and to give evidence-based recommendations to improve the quality of care for women who undergo gynecologic surgery. **METHODS:** A computer-based systematic review of the MEDLINE, CENTRAL, Pubmed, EMBASE, and SciSearch databases as well as institutional guidelines was performed. The time limit was set at 2000-2019. For the literature search, PRISMA guidelines were followed. A modified-Delphi method was performed in three rounds by a panel of experts to reach a consensus of conclusions and recommendations. **RESULTS:** Indocyanine green (ICG) is used primarily in gynecology for sentinel node-mapping. In endometrial and cervical cancer, ICG is a feasible, safe, time-efficient, and reliable method for lymphatic mapping, with better bilateral detection rates. Experience in vulvar cancer is more limited, with ICG used together with Tc-99 m as a dual tracer and alone in video endoscopic inguinal lymphadenectomy. In early ovarian cancer, results are still preliminary but promising. Indocyanine green fluorescence imaging also is used for ureteral assessment, allowing intraoperative ureteral visualization, to reduce the risk of ureteral injury

during gynecologic surgery.**CONCLUSIONS:** For most gynecologic cancers, ICG fluorescence imaging is considered the tracer of choice for lymphatic mapping. The use of this new technology expands to a better ureteral assessment.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 5.344 **Quartil:** 1 **Categoría:** Oncology; Surgery

Posición: Oncology 82/242; Surgery 19/211

ONCOLOGÍA RADIOTERÁPICA

Nº Artículos indexados: 1

Factor de Impacto total: S/IF

Factor impacto medio x artículo: 0

Calvo-Ortega JF, Greer PB4, Hermida-López M, **Moragues-Femenía S**, **Laosa-Bello C**, **Casals-Farran J**.

Validation of virtual water phantom software for pre-treatment verification of single-isocenter multiple-target stereotactic radiosurgery.

J Appl Clin Med Phys. 2021 Jun;22(6):241-252. doi: 10.1002/acm2.13269. Epub 2021 May 24.

The aim of this study was to benchmark the accuracy of the Virtual Phantom Epid dose Reconstruction (VIPER) software for pre-treatment dosimetric verification of multiple-target stereotactic radiosurgery (SRS). VIPER is an EPID-based method to reconstruct a 3D dose distribution in a virtual phantom from in-air portal images. Validation of the VIPER dose calculation was assessed using several MLC-defined fields for a 6 MV photon beam. Central axis percent depth doses (PDDs) and output factors were measured with an ionization chamber in a water tank, while dose planes at a depth of 10 cm in a solid flat phantom were acquired with radiochromic films. The accuracy of VIPER for multiple-target SRS plan verification was benchmarked against Monte Carlo simulations. Eighteen multiple-target SRS plans designed with the Eclipse treatment planning system were mapped to a cylindrical water phantom. For each plan, the 3D dose distribution reconstructed by VIPER within the phantom was compared with the Monte Carlo simulation, using a 3D gamma analysis. Dose differences (VIPER vs. measurements) generally within 2% were found for the MLC-defined fields, while film dosimetry revealed gamma passing rates (GPRs) $\geq 95\%$ for a 3%/1 mm criteria. For the 18 multiple-target SRS plans, average 3D GPRs greater than 93% and 98% for the 3%/2 mm and 5%/2 mm criteria, respectively. Our results validate the use of VIPER as a dosimetric verification tool for pre-treatment QA of single-isocenter multiple-target SRS plans. The method requires no setup time on the linac and results in an accurate 3D characterization of the delivered dose.

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Indexado en: PubMed

PEDIATRIA DEXEUS – PAIDO SALUT INFANTIL

Nº Artículos indexados: 1

Factor de Impacto total: 1.817

Factor impacto medio x artículo: 1.817

Porta R, Miralles N, Paltrinieri A, Ibáñez B, Giménez J, Roca T, Vega A.

A Breast Milk Pump at the Bedside: A Project to Increase Milk Production in Mothers of Very Low Birth Weight Infants.

Breastfeed Med. 2021 Apr;16(4):309-312. doi: 10.1089/bfm.2020.0122. Epub 2020 Dec 22.

The amount of milk production in mothers of babies admitted to the neonatal intensive care unit (NICU) is mostly determined by some actions focused on the first hours and days after birth. Working for an improvement in our previous results in terms of maternal expressed breast milk (MEBM) production, we designed a pilot project and a small observational study. After increasing the number of breast milk pumps to allow full-time availability and implementing educational strategies and updated information for parents, the volume of MEBM production by day 14 after birth was doubled and increased to >500 mL per day. The rate of exclusive breastfeeding at discharge improved from 26.67% to 76.19%. The cost of the use of donor milk per patient decreased by 15.7%. This study is an example of a cost-beneficial quality improvement strategy. It demonstrates the importance of an optimal supply of breast milk pumps in NICU and educational interventions focused on enhancing MEBM production.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 1.817

Quartil: 3

Categoría: Pediatrics; Obstetrics & Gynecology

Posición: Pediatrics 88/129; Obstetrics & Gynecology 68/83 (Q4)

PSIQUIATRIA Y PSICOLOGIA – PSICODEX SL

Nº Artículos indexados: 6

Factor de Impacto total: 10.384

Factor impacto medio x artículo: 1.730

Agüera Z, Lozano-Madrid M, **Mallorquí-Bagué N**, Jiménez-Murcia S, Menchón JM, Fernández-Aranda F.

A review of binge eating disorder and obesity.

Neuropsychiatr. 2021 Jun;35(2):57-67. doi: 10.1007/s40211-020-00346-w. Epub 2020 Apr 28.

Binge eating disorder (BED) is a mental illness characterised by recurrent binge eating episodes in the absence of appropriate compensatory behaviours. Consequently, BED is strongly associated with obesity. The current review aims to provide an update of the most relevant aspects of BED (e.g., clinical profile, aetiology and treatment approaches), in order not only to facilitate a better understanding of the disorder and its clinical consequences, but also to identify potential targets of prevention and intervention. Patients with BED often present high comorbidity with other medical conditions and psychiatric disorders. Numerous risk factors have been associated with the development and maintenance of the disorder. Moreover, although some treatments for BED have proven to be effective in addressing different key aspects of the disorder, the rates of patients that have ever received specific treatment for BED are very low. The factors involved and how to implement effective treatments will be discussed for the purpose of addressing the eating symptomatology and comorbid obesity.

Publisher: Die Binge-eating-Störung (BES) ist eine psychische Erkrankung, die durch wiederkehrende Essanfälle und das Fehlen eines angemessenen Kompensationsverhaltens gekennzeichnet ist. In der Folge besteht eine starke Assoziation mit Adipositas. Der vorliegende Beitrag bietet eine aktuelle Übersicht zu den wichtigsten Gesichtspunkten von BES, unter anderem zu klinischem Bild, Ätiologie und Behandlungsansätzen. Ziel ist nicht nur ein besseres Verstehen der Erkrankung und ihrer klinischen Folgen, sondern auch die Identifikation potenzieller Ansatzpunkte für Prävention und Intervention. Patienten mit BES zeigen oft eine hochgradige Komorbidität mit anderen somatischen und psychischen Erkrankungen. Für zahlreiche Risikofaktoren wurde ein Zusammenhang mit der Entwicklung und Erhaltung der Störung ermittelt. Obwohl sich einige therapeutische Ansätze in Bezug auf verschiedene Kernaspekte der BES als wirksam erwiesen haben, hat nur ein sehr geringer Anteil der Patienten je eine spezifische Behandlung erhalten. Es werden Einflussfaktoren erörtert und die Frage diskutiert, wie sich wirksame Therapien umsetzen lassen, um die Esssymptomatik und komorbide Adipositas zu beeinflussen

Indexado en: PubMed/WOS/JCR/ JCI/ JCI/Emerging sources Citation Index (ESCI)

Journal Citation Index: 0.24

Quartil: 4

Categoría: Psychiatry

Posición: 211/252

Guerrero-Vaca D, Granero R, Fernández-Aranda F, **Mestre-Bach G**, Martín-Romera V, **Mallorquí-Bagué N**, Mena-Moreno T, Aymamí N, Del Pino-Gutiérrez A, Gómez-Peña M, Moragas L, Agüera Z, Vintró-Alcaraz C, Lozano-Madrid M, Menchón JM, Tárrega S, Munguía L, Jiménez-Murcia S.

Explicit and Implicit Emotional Expression in Gambling Disorder Measured by a Serious Game: A Pilot Study.

J Gambl Stud. 2021 Jun;37(2):467-481. doi: 10.1007/s10899-020-09945-2.

Behavioral addictions have been related with biased emotional reactions to risky choices. However, few studies have analyzed the role of both explicit and implicit emotional expression in gambling disorder (GD). This pilot study aims to examine emotion regulation in treatment-seeking patients with GD. The sample included n = 35 participants classified into three groups: patients with current GD, patients with GD in remission, and a control group without GD. Implicit emotional expressions were evaluated through a serious videogame (Playmancer) and explicit emotions were measured through self-reports. Patients in the current GD group had, compared to the remission and control groups, lower levels of implicit emotion expression and higher levels of explicit emotion expression. The patients in GD remission group endorsed better emotion regulation capacity in comparison to patients with current GD. We conclude that differences in emotion expression profiles (such as

anger and anxiety) should be considered both in the development of screening and diagnostic measures and in the planning of prevention and treatment programs.

Indexado en: PubMed/WOS/JCR/JCI/ Journal Sciences Citation Index (JSCI)

Factor Impacto: 3.655

Quartil: 1

Categoría: Psychology, Multidisciplinary; Substance Abuse

Posición: Psychology, Multidisciplinary 32/140; Substance Abuse 13/37 (Q2)

Labad J, González-Rodríguez A, Cobo J, Puntí J, **Farré JM.**

A systematic review and realist synthesis on toilet paper hoarding: COVID or not COVID, that is the question.

PeerJ. 2021 Jan 29;9:e10771. doi: 10.7717/peerj.10771. eCollection 2021.

OBJECTIVE: To explore whether the coronavirus disease 2019 (COVID-19) pandemic is associated with toilet paper hoarding and to assess which risk factors are associated with the risk of toilet paper hoarding. **DESIGN:** A systematic review and realist review were conducted. **DATA SOURCES:** PubMed, Web of Science, Scopus and PsycINFO were searched (systematic review). PubMed, pre-prints and grey literature were also searched (realist review). The databases were searched from inception until October 2020. **STUDY SELECTION:** There were no restrictions on the study design. **OUTCOMES AND MEASURES:** For the systematic review, toilet paper hoarding was the main outcome, and pathological use of toilet paper was the secondary outcome. For the realist review, the context-mechanisms-outcome (CMO) scheme included the COVID-19 pandemic (context), four proposed mechanisms, and one outcome (toilet paper hoarding). The four potential mechanisms were (1) gastrointestinal mechanisms of COVID-19 (e.g. diarrhoea), (2) social cognitive biases, (3) stress-related factors (mental illnesses, personality traits) and (4) cultural aspects (e.g. differences between countries). **ELIGIBILITY CRITERIA FOR SELECTING STUDIES:** All studies of human populations were considered (including general population studies and clinical studies of patients suffering from mental health problems). **RESULTS:** The systematic review identified 14 studies (eight studies for the main outcome, six studies for the secondary outcome). Three surveys identified the role of the COVID-19 threat in toilet paper hoarding in the general population. One study pointed to an association between a personality trait (conscientiousness) and toilet paper buying and stockpiling as well as an additional significant indirect effect of emotionality through the perceived threat of COVID-19 on toilet paper buying and stockpiling. Six case reports of pathological use of toilet paper were also identified, although none of them were associated with the COVID-19 pandemic. The realist review suggested that of all the mechanisms, social cognitive biases and a bandwagon effect were potential contributors to toilet paper hoarding in the general population. The stressful situation (COVID-19 pandemic) and some personality traits (conscientiousness) were found to be associated with toilet paper hoarding. Cultural differences were also identified, with relatively substantial effects of toilet paper hoarding in several Asian regions (Australia, Japan, Taiwan and Singapore). **CONCLUSIONS:** The COVID-19 pandemic has been associated with a worldwide increase in toilet paper hoarding. Social media and social cognitive biases are major contributors and might explain some differences in toilet paper hoarding between countries. Other mental health-related factors, such as the stressful situation of the COVID-19 pandemic, fear of contagion, or particular personality traits (conscientiousness), are likely to be involved. **REGISTRATION:** PROSPERO CRD42020182308.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 2.984

Quartil: 2

Categoría: Multidisciplinary Sciences

Posición: 27/72

Lasheras G, Farré-Sender B, Osma J, Martínez-Borba V, Mestre-Bach G.

Mother-infant bonding screening in a sample of postpartum women: comparison between online vs offline format.

J Reprod Infant Psychol. 2021 May 5:1-16. doi: 10.1080/02646838.2021.1921716. Online ahead of print.

Aims: We aim to study the the reliability and factorial structure of the Postpartum Bonding Questionnaire (PBQ) administered through two different formats, offline (paper-and-pencil) and online. We also compared clinical, obstetrical, reproductive, and psychopathological variables related to poor mother infant bonding (MIB). **Methods:** A cross-sectional study was conducted on 1,269 mothers. The offline group included 812 women who attended a 40-day postpartum clinical appointment. The online group consisted of 457 women recruited during admission for delivery who volunteered to carry out the online protocol 40 days postpartum. All the participants individually completed the PBQ, the Edinburg Postnatal Depression Scale (EPDS) and other clinical and sociodemographic variables. **Results:** The 4-factor solution proposed in the PBQ and its Spanish validation showed good model fit for both samples. Online participants reported higher levels of stress, depressive symptoms, and poor bonding, specifically on PBQ scores and the Rejection and Anger subscales. No differences were found in both samples regarding the type of statistical associations between PBQ and sociodemographic, reproductive, obstetric and psychological outcomes. **Conclusion:** Online assessment may be an appropriate option for detecting possible alterations in MIB due to the reduction of desirability bias, the increased perception of anonymity, and being a more cost-effective method.

Indexado en: PubMed/WOS/JCR/JCI/ Journal Sciences Citation Index (JSCI)

Factor Impacto: 2.481

Quartil: 2

Categoría: Psychology, Multidisciplinary

Posición: 60/140

Raventós J, Sabate R.

Air Curtains Equipped With Hydroalcoholic Aerosol Sprayers for Massive COVID-19 Disinfection.

Front Public Health. 2021 Jan 28;8:582782. doi: 10.3389/fpubh.2020.582782. eCollection 2020.

Indexado en: PubMed/WOS/JCR/JCI/ Journal Sciences Citation Index (JSCI)

Factor Impacto: 3.709

Quartil: 1

Categoría: Public, Enviromental & Occupational Health

Posición: 36/176

Torres-Giménez A, Roca-Lecumberrí A, Sureda B, Andrés-Perpiña S, Palacios-Hernández B, Gelabert E, **Farré-Sender B**, Subirà-Álvarez S, García-Esteve L.

External Validation and Test-Retest Reliability of Postpartum Bonding Questionnaire in Spanish Mothers.

Span J Psychol. 2021 Oct 11;24:e47. doi: 10.1017/SJP.2021.44.

The aim of the present study was to validate the Spanish Postpartum Bonding Questionnaire (PBQ) against external criteria of bonding disorder, as well as to establish its test-retest reliability. One hundred fifty-six postpartum women consecutively recruited from a perinatal mental health outpatient unit completed the PBQ at 4-6 weeks postpartum. Four weeks later, all mothers completed again the PBQ and were interviewed using the Birmingham Interview for Maternal Mental Health to establish the presence of a bonding disorder. Receiver operating characteristic curve analysis revealed an area under the curve (AUC) value for the PBQ total score of 0.93, 95% CI [0.88, 0.98], with the optimal cut-off of 13 for detecting bonding disorders (sensitivity: 92%, specificity: 87%). Optimal cut-off scores for each scale were also obtained. The test-retest reliability coefficients were moderate to good. Our data confirm the validity of PBQ for detecting bonding disorders in Spanish population.

Indexado en: PubMed/WOS/JCR/JCI/ Journal Sciences Citation Index (JSCI)

Factor Impacto: 1.264

Quartil: 4

Categoría: Psychology, Multidisciplinary

Posición: 106/140

REUMATOLOGIA

Nº Artículos indexados: 4

Factor de Impacto total: 0.90

Factor impacto medio x artículo: 0.225

Almirall M, Martínez-Mateu SH, **Alegre C**, Collado A, Ojeda B, Arias A, Calandre EP, Hidalgo J, Carrillo MD, Huguet R, Tornero J, Alperi-López M, Fernández-Gutierrez B, Julià A, Marsal S, Arranz LI; IMIDC Project Collaborative Group.

Dietary habits in patients with fibromyalgia: a cross-sectional study.

Clin Exp Rheumatol. 2021 May-Jun;39 Suppl 130(3):170-173. Epub 2021 Jun 21.

OBJECTIVES: To the scarce information on dietary habits in fibromyalgia (FM), it is added that there are no comparative studies with other rheumatic diseases. The objective of this study was to characterise the dietary habits of patients with FM by comparing, for the first time, with healthy controls (HC) and rheumatoid arthritis (RA). **METHODS:** This cross-sectional, observational study was based on data obtained from the Dietfibrom project for FM and from the IMID Consortium for RA and HC. All participants completed a food frequency questionnaire evaluating their weekly dietary intake of main food groups. The three cohorts were compared using a multiple logistic regression model adjusted for age, sex, and body mass index. **RESULTS:** After quality control, n=287 FM, n=1,983 HC and n=1,942 RA patients were analysed. We found that FM had a profound impact in the diet compared to HC, reducing the consumption of dairy (OR=0.32, p<0.0001), bread and/or whole grain cereals (OR=0.59, p=0.0006), fresh fruit (OR=0.66, P=0.008), and fish (OR=0.64, p=0.002). These same four food groups were also significantly reduced in FM patients in comparison to RA patients (p<0.0005 in all cases). Additionally, a lower consumption of pasta, rice and/or potatoes was also observed in FM compared to RA (OR=0.72, p=0.028). **CONCLUSIONS:** The present cross-sectional study shows that FM is associated to a significant change in the normal dietary patterns. These results underscore the importance of diet in this prevalent disease and are a warning of the potential long-range effects of a deficient nutritional status.

Indexado en: PubMed

Meißner M, Alegre de Miquel C.

La distensión hídrica en las capsulitis de hombro

Reumatol Clin (Engl Ed). 2021 Feb;17(2):120. doi: 10.1016/j.reuma.2019.01.003.

Epub 2019 Mar 5. [Article in English, Spanish]

Indexado en: PubMed/WOS/JCR/ JCI/ JCI/Emerging sources Citation Index (ESCI)

Journal Citation Index: 0.30

Quartil: 4

Categoría: Rheumatology

Posición: 39/48

Rivera Redondo J, Díaz Del Campo Fontecha P, **Alegre de Miquel C**, Almirall Bernabé M, Casanueva Fernández B, Castillo Ojeda C, Collado Cruz A, Montesó-Curto P, Palao Tarrero Á, Trillo Calvo E, Vallejo Pareja MÁ, Brito García N, Merino Argumánez C, Plana Farras MN; en nombre del Panel de expertos.

Recomendaciones SER sobre el manejo de los pacientes con fibromialgia. Parte I: diagnóstico y tratamiento.

[Article in English, Spanish]

Reumatol Clin (Engl Ed). 2021 Apr 27:S1699-258X(21)00058-9. doi: 10.1016/j.reuma.2021.02.004. Online ahead of print.

OBJECTIVE: To prevent the impairment of fibromyalgia patients due to harmful actions in daily clinical practice that are potentially avoidable. **METHODS:** A multidisciplinary team identified the main areas of interest and carried out an analysis of scientific evidence and established recommendations based on the evidence and "formal evaluation" or "reasoned judgment" qualitative analysis techniques. **RESULTS:** A total of 39 recommendations address diagnosis, unsafe or ineffective treatment interventions and patient and healthcare workers' education. This part I shows the first 27 recommendations on the first 2 areas. **CONCLUSIONS:**

Establishing a diagnosis improves the patient's coping with the disease and reduces healthcare costs. NSAIDs, strong opioids and benzodiazepines should be avoided due to side effects. There is no good evidence to justify the association of several drugs. There is also no good evidence to recommend any complementary medicine. Surgeries show a greater number of complications and a lower degree of patient satisfaction and therefore should be avoided if the surgical indication is not clearly established.

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Indexado en: PubMed/WOS/JCR/ JCI/ JCI/Emerging sources Citation Index (ESCI)

Journal Citation Index: 0.30

Quartil: 4

Categoría: Rheumatology

Posición: 39/48

Rivera Redondo J, Díaz Del Campo Fontecha P, **Alegre de Miguel C**, Almirall Bernabé M, Casanueva Fernández B, Castillo Ojeda C, Collado Cruz A, Montesó-Curto P, Palao Tarrero Á, Trillo Calvo E, Vallejo Pareja MÁ, Brito García N, Merino Argumánéz C, Plana Farras MN; Grupo de revisores de la evidencia.

Recomendaciones SER sobre el manejo de los pacientes con fibromialgia. Parte II. [Article in English, Spanish]

Reumatol Clin (Engl Ed). 2021 Apr 28:S1699-258X(21)00063-2. doi: 10.1016/j.reuma.2021.01.006. **Online Ahead of print.**

OBJECTIVE: To prevent the deterioration of patients with fibromyalgia due to potentially avoidable harmful actions in clinical practice.**METHODS:** A multidisciplinary panel of experts identified key areas, analysed the scientific evidence and formulated recommendations based on this evidence and qualitative techniques of «formal assessment» or «reasoned judgement».**RESULTS:** Thirty-nine recommendations were made on diagnosis, ineffective and unsafe treatments, patient education and practitioner training. This partII shows the 12 recommendations, referring to the latter two areas. **CONCLUSIONS:** Good knowledge of fibromyalgia on the part of patients improves their coping and acceptance of the disease and reduces the severity of some clinical manifestations. Healthcare professionals treating patients with fibromyalgia should be well trained in this disease to improve treatment outcomes and patient relationships.

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Indexado en: PubMed/WOS/JCR/ JCI/ JCI/Emerging sources Citation Index (ESCI)

Journal Citation Index: 0.30

Quartil: 4

Categoría: Rheumatology

Posición: 39/48

Artículos destacados en 1er Decil

CARDIOLOGIA

Sutton R, Fedorowski A, Olshansky B, Gert van Dijk J, Abe H, Brignole M, de Lange F, Kenny RA, Lim PB, **Moya A**, Rosen SD, Russo V, Stewart JM, Thijs RD, Benditt DG.

Tilt testing remains a valuable asset.

Eur Heart J. 2021 May 1;42(17):1654-1660. doi: 10.1093/eurheartj/ehab084.

Head-up tilt test (TT) has been used for >50 years to study heart rate/blood pressure adaptation to positional changes, to model responses to haemorrhage, to assess orthostatic hypotension, and to evaluate haemodynamic and neuroendocrine responses in congestive heart failure, autonomic dysfunction, and hypertension. During these studies, some subjects experienced syncope due to vasovagal reflex. As a result, tilt testing was incorporated into clinical assessment of syncope when the origin was unknown. Subsequently, clinical experience supports the diagnostic value of TT. This is highlighted in evidence-based professional practice guidelines, which provide advice for TT methodology and interpretation, while concurrently identifying its limitations. Thus, TT remains a valuable clinical asset, one that has added importantly to the appreciation of pathophysiology of syncope/collapse and, thereby, has improved care of syncopal patients.

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Indexado en: PubMed/WOS/JCR/JCI/ Science Citation Index Expanded (SCIE)

Factor Impacto: 29.983

Quartil: 1

Categoría: Cardiac & Cardiovascular Systems

Posición: 2/141

DIAGNOSTICO POR LA IMAGEN

Rojas G, Perelli S, Ibanez M, Formagnana M, **Ormazabal I**, Monllau JC.

Effect of Modified Lemaire Anterolateral Extra-articular Tenodesis on the Magnetic Resonance Imaging Maturity Signal of Anterior Cruciate Ligament Hamstring Graft.

Am J Sports Med. 2021 Jun 16:3635465211018858. doi: 10.1177/03635465211018858. Online ahead of print.

BACKGROUND: Lateral extra-articular tenodesis (LET) is one of the most widely used procedures to restore anterolateral stability. Clinical outcomes after the addition of LET to anterior cruciate ligament (ACL) reconstruction (ACLR) have been widely investigated; however, the potential influence of LET on the ACL ligamentization process has not been examined. **PURPOSE/HYPOTHESIS:** The purpose was to use 10-month postoperative magnetic resonance imaging (MRI) scans to determine whether the maturity of grafts after hamstring autograft ACLR was affected by concomitant LET. The hypothesis was that when modified Lemaire lateral extra-articular tenodesis (MLLET) was performed, the MRI parameters of ACL graft maturity would be modified. **STUDY DESIGN:** Cohort study; Level of evidence, 3. **METHODS:** The study included patients treated between December 2017 and December 2018 who had undergone anatomic 3-strand hamstring tendon autograft ACLR, with or without concomitant MLLET, and had undergone MRI 10 months postoperatively. Thus, the study included 30 patients who had isolated ACLR and 22 patients who had ACLR plus MLLET. The 2 groups were comparable based on all criteria analyzed. To evaluate graft maturity, the signal-to-noise quotient (SNQ) was measured in 3 regions of interest of the proximal, midsubstance, and distal ACL graft. Lower SNQ ratios indicate less water content and, theoretically, better maturity and healing of the graft. **RESULTS:** The mean \pm SD for SNQ was 4.62 ± 4.29 (range, 3.12-6.19) in the isolated ACLR group and 7.59 ± 4.68 (range, 4.38-8.04) in the

ACLR plus MLET group (P = .012). Upon comparing the mean values of the 3 portions between the 2 groups, we found a significant difference between the 2 groups for the proximal and middle portions (P = .007 and P = .049, respectively) but no difference in the distal portion (P = .369). **CONCLUSION:** At the 10-month follow-up, hamstring tendon autografts for anatomic ACLR with MLET did not show the same MRI signal intensity compared with isolated hamstring anatomic ACLR.

Indexado en: PubMed/WOS/JCR/JCI/ Science Citation Index Expanded (SCIE)

Factor Impacto: 6.202

Quartil: 1

Categoría: Orthopedics; Sport Sciences

Posición: Orthopedics 3/82; Sport Sciences 7/88

DIGESTIVO

Lopez-Nava G, Asokkumar R, Bautista-Castaño I, Laster J, Negi A, Fook-Chong S, **Nebreda Duran J**, **Espinett Coll E**, Gebelli JP, Garcia Ruiz de Gordejuela A.

Endoscopic sleeve gastroplasty, laparoscopic sleeve gastrectomy, and laparoscopic greater curve plication: do they differ at 2 years?

Endoscopy. 2021 Mar;53(3):235-243. doi: 10.1055/a-1224-7231. Epub 2020 Jul 22.

Comment in

Endoscopy. 2021 Mar;53(3):244-245.

Endoscopy. 2021 Mar;53(3):v12.

Endoscopy. 2021 Mar;53(3):339.

Endoscopy. 2021 Mar;53(3):340.

Endoscopic sleeve gastroplasty (ESG) is an effective treatment option for obesity. However, data comparing its efficacy to bariatric surgery are scarce. We aimed to compare the effectiveness and safety of ESG with laparoscopic sleeve gastrectomy (LSG) and laparoscopic greater curve plication (LGCP) at 2 years. **METHODS :** We reviewed 353 patient records and identified 296 patients who underwent ESG (n=199), LSG (n=61), and LGCP (n=36) at four centers in Spain between 2014 and 2016. We compared their total body weight loss (%TBWL) and safety over 2 years. A linear mixed model (LMM) was used to analyze repeated measures of weight loss outcomes at 6, 12, 18, and 24 months to compare the three procedures. **RESULTS :** Among the 296 patients, 210 (ESG 135, LSG 43, LGCP 32) completed 1 year of follow-up and 102 (ESG 46, LSG 34, LGCP 22) reached 2 years. Their mean (standard deviation [SD]) body mass index (BMI) was 39.6 (4.8) kg/m². There were no differences in age, sex, or BMI between the groups. In LMM analysis, adjusting for age, sex, and initial BMI, we found ESG had a significantly lower TBWL, %TBWL, and BMI decline compared with LSG and LGCP at all time points (P=0.001). The adjusted mean %TBWL at 2 years for ESG, LSG, and LGCP were 18.5%, 28.3%, and 26.9%, respectively. However, ESG, when compared with LSG and LGCP, had a shorter inpatient stay (1 vs. 3 vs. 3 days; P<0.001) and lower complication rate (0.5% vs. 4.9% vs. 8.3%; P=0.006). **CONCLUSION :** All three procedures induced significant weight loss in obese patients. Although the weight loss was lower with ESG compared with other techniques, it displayed a better safety profile and shorter hospital stay.

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Factor Impacto: 10.093

Quartil: 1

Categoría: Gastroenterology & Hepatology; Surgery

Posición: Gastroenterology & Hepatology 11/92; Surgery 5/212

Musto JA, Eickhoff J, Ventura-Cots M, Abrahams JG, Bosques-Padilla F, Verna EC, Brown RS Jr, Vargas V, Altamirano J, Caballería J, Shawcross D, Louvet A, Mathurin P, Garcia-Tsao G, Schnabl B, Bataller R, Lucey MR.

The level of alcohol consumption in the prior year does not impact clinical outcomes in patients with alcohol-associated hepatitis (AH).

Liver Transpl. 2021 Jun 10. doi: 10.1002/lt.26203. Online ahead of print.

BACKGROUND AND AIMS: AUDIT-10 and its shorter form, AUDIT-C, are questionnaires used to characterize severity of drinking. We hypothesized that liver injury and short-term outcomes of alcohol-associated hepatitis (AH) would correlate with a patient's recent alcohol consumption as determined by AUDIT-10 and -C.

METHODS: We analyzed a prospective international database of patients with AH diagnosed based on the NIAAA standard definitions. All subjects were interviewed using AUDIT-10. Primary outcomes included the discriminatory ability of the AUDIT-10 and AUDIT-C scores for predicting survival status at 28 and 90 days and severity of liver injury, as measured by MELD-Na. The relationship between AUDIT scores and survival status was quantified by calculating the area under the curve (AUC) of the receiver operating characteristics (ROC) analysis. The relationship between AUDIT scores and MELD-Na was examined using correlation coefficients. **RESULTS:** In 245 subjects (age range: 25-75 years) (35% female), we found no correlation between AUDIT-10 or AUDIT-C scores and either 28-day or 90-day mortality. Similarly, there was no correlation between AUDIT-10 and AUDIT-C and MELD-Na scores. There was a strong positive correlation between MELD-Na and 28-day and 90-day mortality. Additional measures of severity of alcohol use (average grams of alcohol consumed per day, years of drinking, convictions for driving under the influence and rehab attempts) and psychosocial factors (marriage, paid employment and level of social support) had no influence on MELD-Na. **CONCLUSIONS:** In patients presenting with AH, AUDIT-10 and AUDIT-C were not predictors of clinical severity of liver disease nor of short-term mortality, suggesting that level of alcohol consumption in the prior year is not key to the presenting features or outcome of AH.

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Indexado en: PubMed/WOS/JCR /JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 5.799

Quartil: 1

Categoría: Transplantation; Gastroenterology & Hepatology

Posición: Transplantation 4/25; Gastroenterology & Hepatology 26/92

ICATME – INSTITUT CATALÀ DE TRAUMATOLOGIA I MEDICINA DE L'ESPORT

Rojas G, Perelli S, Ibanez M, Formagnana M, Ormazabal I, Monllau JC.

Effect of Modified Lemaire Anterolateral Extra-articular Tenodesis on the Magnetic Resonance Imaging Maturity Signal of Anterior Cruciate Ligament Hamstring Graft.

Am J Sports Med. 2021 Jul; 49(9):2379-2386. doi: 10.1177/03635465211018858. Online ahead of print.

BACKGROUND: Lateral extra-articular tenodesis (LET) is one of the most widely used procedures to restore anterolateral stability. Clinical outcomes after the addition of LET to anterior cruciate ligament (ACL) reconstruction (ACLR) have been widely investigated; however, the potential influence of LET on the ACL ligamentization process has not been examined. **PURPOSE/HYPOTHESIS:** The purpose was to use 10-month postoperative magnetic resonance imaging (MRI) scans to determine whether the maturity of grafts after hamstring autograft ACLR was affected by concomitant LET. The hypothesis was that when modified Lemaire lateral extra-articular tenodesis (MLLET) was performed, the MRI parameters of ACL graft maturity would be modified. **STUDY DESIGN:** Cohort study; Level of evidence, 3. **METHODS:** The study included patients treated between December 2017 and December 2018 who had undergone anatomic 3-strand hamstring tendon

autograft ACLR, with or without concomitant MLLET, and had undergone MRI 10 months postoperatively. Thus, the study included 30 patients who had isolated ACLR and 22 patients who had ACLR plus MLLET. The 2 groups were comparable based on all criteria analyzed. To evaluate graft maturity, the signal-to-noise quotient (SNQ) was measured in 3 regions of interest of the proximal, midsubstance, and distal ACL graft. Lower SNQ ratios indicate less water content and, theoretically, better maturity and healing of the graft. **RESULTS:** The mean \pm SD for SNQ was 4.62 ± 4.29 (range, 3.12-6.19) in the isolated ACLR group and 7.59 ± 4.68 (range, 4.38-8.04) in the ACLR plus MLLET group ($P = .012$). Upon comparing the mean values of the 3 portions between the 2 groups, we found a significant difference between the 2 groups for the proximal and middle portions ($P = .007$ and $P = .049$, respectively) but no difference in the distal portion ($P = .369$). **CONCLUSION:** At the 10-month follow-up, hamstring tendon autografts for anatomic ACLR with MLLET did not show the same MRI signal intensity compared with isolated hamstring anatomic ACLR.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.202

Quartil: 1

Categoría: Orthopedics; Sports Sciences

Posición: Orthopedics 3/82; Sports Sciences 7/88

Wang CK, Cohen D, Kay J, Almasri M, Simunovic N, **Cardenas-Nylander C**, Ranawat AS, Ayeni OR.

The Effect of Femoral and Acetabular Version on Outcomes Following Hip Arthroscopy: A Systematic Review. *J Bone Joint Surg Am.* 2021 Nov 24. doi: 10.2106/JBJS.21.00375. Online ahead of print.

BACKGROUND: Torsional hip deformities are common among patients undergoing hip arthroscopy. However, recent studies have suggested conflicting outcomes following arthroscopy in the setting of abnormal hip version. The purpose of this study was to systematically evaluate the literature and determine the impact of femoral and acetabular version on patient-reported outcomes following primary arthroscopic hip surgery. **METHODS:** This study was conducted in accordance with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) statement. Studies investigating femoral and acetabular version in primary hip arthroscopy with clinical outcomes were identified, and data were extracted in duplicate. **RESULTS:** Overall, 11 studies met inclusion criteria and comprised 1,297 hips (726 femora and 571 acetabulae), with a mean patient age of 29.2 years (range, 14 to 74.7 years). In patients with acetabular retroversion, there was no significant difference, when compared with the normal acetabular version group, in the modified Harris hip score (mHHS), the Hip Outcome Score-Sports Specific Subscale (HOS-SSS), and visual analog scale (VAS) pain scores postoperatively. Among patients with femoral retroversion, in 2 of 3 studies, the authors reported no difference in mHHS postoperatively compared with patients with normal femoral version. In patients with high femoral anteversion, in 2 of 3 studies, the authors reported a significant difference in postoperative mHHS favoring patients with normal femoral version. Studies examining high femoral anteversion included patients with borderline hip dysplasia and patients who underwent concurrent psoas-lengthening procedures. **CONCLUSIONS:** Although the definition of the normal version of the hip varied within the literature, hip arthroscopy in patients with acetabular retroversion resulted in no difference in functional outcomes compared with patients with normal version. Postoperative functional outcomes in patients with femoral retroversion and high femoral anteversion were mixed, although the procedure was possibly less effective in high femoral anteversion combined with specific clinical scenarios. Further prospective studies based on standardized definitions and version analysis techniques would be useful in identifying the precise surgical indications for safe arthroscopic surgical procedures in patients with version abnormalities of the femur and acetabulum, particularly those with high femoral anteversion and retroversion. **LEVEL OF EVIDENCE:** Prognostic Level IV. See Instructions for Authors for a complete description of levels of evidence.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 5.284

Quartil: 1

Categoría: Orthopedics; Surgery

Posición: Orthopedics 5/82; Surgery 20/211

INSTITUTO ONCOLÓGICO DR. ROSELL – DEXEUS

Drilon A, Duruisseaux M, Han JY, **Ito M**, Falcon C, Yang SR, Murciano-Goroff YR, Chen H, Okada M, **Molina MA**, Wislez M, Brun P, Dupont C, Branden E, Rossi G, Schrock A, Ali S, Gounant V, Magne F, Blum TG, Schram AM, Monnet I, Shih JY, Sabari J, Pérol M, Zhu VW, Nagasaka M, Doebele R, Camidge DR, Arcila M, Ou SI, Moro-Sibilot D, **Rosell R**, Muscarella LA, Liu SV, Cadranet J.

Clinicopathologic Features and Response to Therapy of NRG1 Fusion-Driven Lung Cancers: The eNRGy1 Global Multicenter Registry.

J Clin Oncol. 2021 Sep 1;39(25):2791-2802. doi: 10.1200/JCO.20.03307. Epub 2021 Jun 2.

PURPOSE: Although NRG1 fusions are oncogenic drivers across multiple tumor types including lung cancers, these are difficult to study because of their rarity. The global eNRGy1 registry was thus established to characterize NRG1 fusion-positive lung cancers in the largest and most diverse series to date. **METHODS:** From June 2018 to February 2020, a consortium of 22 centers from nine countries in Europe, Asia, and the United States contributed data from patients with pathologically confirmed NRG1 fusion-positive lung cancers. Profiling included DNA-based and/or RNA-based next-generation sequencing and fluorescence in situ hybridization. Anonymized clinical, pathologic, molecular, and response (RECIST v1.1) data were centrally curated and analyzed. **RESULTS:** Although the typified never smoking (57%), mucinous adenocarcinoma (57%), and nonmetastatic (71%) phenotype predominated in 110 patients with NRG1 fusion-positive lung cancer, further diversity, including in smoking history (43%) and histology (43% nonmucinous and 6% nonadenocarcinoma), was elucidated. RNA-based testing identified most fusions (74%). Molecularly, six (of 18) novel 5' partners, 20 unique epidermal growth factor domain-inclusive chimeric events, and heterogeneous 5'/3' breakpoints were found. Platinum-doublet and taxane-based (post-platinum-doublet) chemotherapy achieved low objective response rates (ORRs 13% and 14%, respectively) and modest progression-free survival medians (PFS 5.8 and 4.0 months, respectively). Consistent with a low programmed death ligand-1 expressing (28%) and low tumor mutational burden (median: 0.9 mutations/megabase) immunophenotype, the activity of chemoimmunotherapy and single-agent immunotherapy was poor (ORR 0%/PFS 3.3 months and ORR 20%/PFS 3.6 months, respectively). Afatinib achieved an ORR of 25%, not contingent on fusion type, and a 2.8-month median PFS. **CONCLUSION:** NRG1 fusion-positive lung cancers were molecularly, pathologically, and clinically more heterogeneous than previously recognized. The activity of cytotoxic, immune, and targeted therapies was disappointing. Further research examining NRG1-rearranged tumor biology is needed to develop new therapeutic strategies.

Indexado en: PubMed/WOS/JCR /JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 44.544

Quartil: 1

Categoría: Oncology

Posición: 4/242

Giménez-Capitán A, Bracht J, García JJ, Jordana-Ariza N, García B, Garzón M, Mayo-de-Las-Casas C, Viteri-Ramírez S, Martínez-Bueno A, Aguilar A, Sullivan IG, Johnson E, Huang CY, Gerlach JL, Warren S, Beechem JM, Teixidó C, Rosell R, Reguart N, Molina-Vila MA.

Multiplex Detection of Clinically Relevant Mutations in Liquid Biopsies of Cancer Patients Using a Hybridization-Based Platform.

Clin Chem. 2021 Mar 1;67(3):554-563. doi: 10.1093/clinchem/hvaa248.

BACKGROUND: With the advent of precision oncology, liquid biopsies are quickly gaining acceptance in the clinical setting. However, in some cases, the amount of DNA isolated is insufficient for Next-Generation Sequencing (NGS) analysis. The nCounter platform could be an alternative, but it has never been explored for detection of clinically relevant alterations in fluids. **METHODS:** Circulating-free DNA (cfDNA) was purified from blood, cerebrospinal fluid, and ascites of patients with cancer and analyzed with the nCounter 3 D Single

Nucleotide Variant (SNV) Solid Tumor Panel, which allows for detection of 97 driver mutations in 24 genes. **RESULTS:** Validation experiments revealed that the nCounter SNV panel could detect mutations at allelic fractions of 0.02-2% in samples with ≥ 5 pg mutant DNA/ μ L. In a retrospective analysis of 70 cfDNAs from patients with cancer, the panel successfully detected EGFR, KRAS, BRAF, PIK3CA, and NRAS mutations when compared with previous genotyping in the same liquid biopsies and paired tumor tissues [Cohen kappa of 0.96 (CI = 0.92-1.00) and 0.90 (CI = 0.74-1.00), respectively]. In a prospective study including 91 liquid biopsies from patients with different malignancies, 90 yielded valid results with the SNV panel and mutations in EGFR, KRAS, BRAF, PIK3CA, TP53, NFE2L2, CTNNB1, ALK, FBXW7, and PTEN were found. Finally, serial liquid biopsies from a patient with NSCLC revealed that the semiquantitative results of the mutation analysis by the SNV panel correlated with the evolution of the disease. **CONCLUSIONS:** The nCounter platform requires less DNA than NGS and can be employed for routine mutation testing in liquid biopsies of patients with cancer.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 8.327

Quartil: 1

Categoria: Medical Laboratory Technology

Posición: 1/29

Gonzalez-Cao M, Carrera C, Rodriguez Moreno JF, Rodríguez-Jiménez P, Basa MA, Ochoa RF, Puertolas T, Muñoz-Couselo E, Manzano JL, Marquez-Rodas I, Martín-Liberal J, Soria A, Criado PL, Garcia-Castaño A, Boada A, Ayala de Miguel P, Puig S, Crespo G, Fra PL, Zamora CA, Rodríguez MF, Valles L, **Drozdowskyj A**, Maldonado-Seral C, Gardezabal J, Villalobos L, **Rosell R**, Fernandez-Morales LA, Rodrigo A, **Viteri S**, Provencio M, Berrocal A; Spanish Melanoma Group (GEM).

COVID-19 in melanoma patients: Results of the Spanish Melanoma Group Registry, GRAVID study.

J Am Acad Dermatol. 2021 May;84(5):1412-1415. doi: 10.1016/j.jaad.2021.02.013. Epub 2021 Feb 10.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 11.527

Quartil: 1

Categoria: Dermatology

Posición: 1/68

Gonzalez-Cao M, Puertolas T, Riveiro M, Muñoz-Couselo E, Ortiz C, Paredes R, Podzamczar D, Manzano JL, Molto J, Revollo B, Carrera C, Mateu L, **Fancelli S**, Espinosa E, Clotet B, Martinez-Picado J, Cerezuela P, Soria A, Marquez I, Mandala M, Berrocal A; Spanish Melanoma Group (GEM).

Cancer immunotherapy in special challenging populations: recommendations of the Advisory Committee of Spanish Melanoma Group (GEM).

J Immunother Cancer. 2021 Mar;9(3):e001664. doi: 10.1136/jitc-2020-001664.

Cancer immunotherapy based on the use of antibodies targeting the so-called checkpoint inhibitors, such as programmed cell death-1 receptor, its ligand, or CTLA-4, has shown durable clinical benefit and survival improvement in melanoma and other tumors. However, there are some special situations that could be a challenge for clinical management. Persons with chronic infections, such as HIV-1 or viral hepatitis, latent tuberculosis, or a history of solid organ transplantation, could be candidates for cancer immunotherapy, but their management requires a multidisciplinary approach. The Spanish Melanoma Group (GEM) panel in collaboration with experts in virology and immunology from different centers in Spain reviewed the literature and developed evidence-based guidelines for cancer immunotherapy management in patients with chronic infections and immunosuppression. These are the first clinical guidelines for cancer immunotherapy treatment in special challenging populations. Cancer immunotherapy in chronically infected or immunosuppressed patients is feasible but needs a multidisciplinary approach in order to decrease the risk of complications related to the coexistent comorbidities.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 13.751

Quartil: 1

Categoría: Oncology; Immunology

Posición: Oncology 15/242; Immunology 8/162

Gonzalez-Cao M, Mayo de Las Casas C, Oramas J, Berciano-Guerrero MA, de la Cruz L, Cerezuela P, Arance A, Muñoz-Couselo E, Espinosa E, Puertolas T, Diaz Beveridge R, Ochendusko S, Villanueva MJ, Basterretxea L, Bellido L, Rodriguez D, Campos B, Montagut C, Drozdowskyj A, Molina MA, Lopez-Martin JA(#), Berrocal A(#).

Intermittent BRAF inhibition in advanced BRAF mutated melanoma results of a phase II randomized trial.

Nat Commun. 2021 Dec 1;12(1):7008. doi: 10.1038/s41467-021-26572-6.

Combination treatment with BRAF (BRAFi) plus MEK inhibitors (MEKi) has demonstrated survival benefit in patients with advanced melanoma harboring activating BRAF mutations. Previous preclinical studies suggested that an intermittent dosing of these drugs could delay the emergence of resistance. Contrary to expectations, the first published phase 2 randomized study comparing continuous versus intermittent schedule of dabrafenib (BRAFi) plus trametinib (MEKi) demonstrated a detrimental effect of the "on-off" schedule. Here we report confirmatory data from the Phase II randomized open-label clinical trial comparing the antitumoral activity of the standard schedule versus an intermittent combination of vemurafenib (BRAFi) plus cobimetinib (MEKi) in advanced BRAF mutant melanoma patients (NCT02583516). The trial did not meet its primary endpoint of progression free survival (PFS) improvement. Our results show that the antitumor activity of the experimental intermittent schedule of vemurafenib plus cobimetinib is not superior to the standard continuous schedule. Detection of BRAF mutation in cell free tumor DNA has prognostic value for survival and its dynamics has an excellent correlation with clinical response, but not with progression. NGS analysis demonstrated de novo mutations in resistant cases.

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Factor Impacto: 14.919

Quartil: 1

Categoría: Multidisciplinary Sciences

Posición: 4/72

Gonzalez-Cao M, Martinez-Picado J, Rosell R.

Safety of Anti-PD-L1 Inhibition in HIV-1-Infected Patients With Cancer-Reply.

JAMA Oncol. 2020 Nov 1;6(11):1810-1811. doi: 10.1001/jamaoncol.2020.3400.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 31.777

Quartil: 1

Categoría: Oncology

Posición: 8/242

Laza-Briviesca R, Cruz-Bermúdez A, Nadal E, Insa A, García-Campelo MDR, Huidobro G, Dómine M, Majem M, Rodríguez-Abreu D, Martínez-Martí A, De Castro Carpeño J, Cobo M, López Vivanco G, Del Barco E, Bernabé Caro R, Viñolas N, Barneto Aranda I, **Viteri S**, Massuti B, Casarrubios M, Sierra-Rodero B, Tarín C, García-Grande A, Haymaker C, Wistuba II, Romero A, Franco F, Provencio M.

Blood biomarkers associated to complete pathological response on NSCLC patients treated with neoadjuvant chemoimmunotherapy included in NADIM clinical trial.

Clin Transl Med. 2021 Jul;11(7):e491. doi: 10.1002/ctm2.491.

BACKGROUND: Immunotherapy is being tested in early-stage non-small cell lung cancer (NSCLC), and achieving higher rates of complete pathological responses (CPR) as compared to standard of care. Early identification of CPR patients has vital clinical implications. In this study, we focused on basal peripheral immune cells and their treatment-related changes to find biomarkers associated to CPR. **METHODS:** Blood from 29 stage IIIA NSCLC patients participating in the NADIM trial (NCT03081689) was collected at diagnosis and post neoadjuvant treatment. More than 400 parameters of peripheral blood mononuclear cells (PBMCs) phenotype and plasma soluble factors were analyzed. **RESULTS:** Neoadjuvant chemoimmunotherapy altered more than 150 immune

parameters. At diagnosis, 11 biomarkers associated to CPR were described, with an area under the ROC curve >0.70 and p-value <.05. CPR patients had significantly higher levels of CD4+ PD-1+ cells, NKG2D, and CD56 expression on T CD56 cells, intensity of CD25 expression on CD4+ CD25hi+ cells and CD69 expression on intermediate monocytes; but lower levels of CD3+ CD56- CTLA-4+ cells, CD14++ CD16+ CTLA-4+ cells, CTLA-4 expression on T CD56 cells and lower levels of b-NGF, NT-3, and VEGF-D in plasma compared to non-CPR. Post treatment, CPR patients had significantly higher levels of CD19 expression on B cells, BCMA, 4-1BB, MCSF, and PARC and lower levels of MPIF-1 and Flt-3L in plasma compared to non-CPR. **CONCLUSIONS:** Patients achieving CPR seem to have a distinctive peripheral blood immune status at diagnosis, even showing different immune response to treatment. These results reinforce the different biology behind CPR and non-CPR responses.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 11.492 **Quartil:** 1 **Categoría:** Oncology; Medicine, Research & Experimental

Posición: Oncology 24/242; Medicine, Research & Experimental 10/140

Park K, Haura EB, Leighl NB, Mitchell P, Shu CA, Girard N, **Viteri S**, Han JY, Kim SW, Lee CK, Sabari JK, Spira AI, Yang TY, Kim DW, Lee KH, Sanborn RE, Trigo J, Goto K, Lee JS, Yang JC, Govindan R, Bauml JM, Garrido P, Krebs MG, Reckamp KL, Xie J, Curtin JC, Haddish-Berhane N, Roshak A, Millington D, Lorenzini P, Thayu M, Knoblauch RE, Cho BC.

Amivantamab in EGFR Exon 20 Insertion-Mutated Non-Small-Cell Lung Cancer Progressing on Platinum Chemotherapy: Initial Results From the CHRYSALIS Phase I Study.

J Clin Oncol. 2021 Oct 20;39(30):3391-3402. doi: 10.1200/JCO.21.00662. Epub 2021 Aug 2.

Comment in

J Clin Oncol. 2021 Oct 20;39(30):3403-3406.

Nat Rev Clin Oncol. 2021 Oct;18(10):604.

PURPOSE: Non-small-cell lung cancer (NSCLC) with epidermal growth factor receptor (EGFR) exon 20 insertion (Exon20ins) mutations exhibits inherent resistance to approved tyrosine kinase inhibitors. Amivantamab, an EGFR-MET bispecific antibody with immune cell-directing activity, binds to each receptor's extracellular domain, bypassing resistance at the tyrosine kinase inhibitor binding site. **METHODS:** CHRYSALIS is a phase I, open-label, dose-escalation, and dose-expansion study, which included a population with EGFR Exon20ins NSCLC. The primary end points were dose-limiting toxicity and overall response rate. We report findings from the postplatinum EGFR Exon20ins NSCLC population treated at the recommended phase II dose of 1,050 mg amivantamab (1,400 mg, \geq 80 kg) given once weekly for the first 4 weeks and then once every 2 weeks starting at week 5. **RESULTS:** In the efficacy population (n = 81), the median age was 62 years (range, 42-84 years); 40 patients (49%) were Asian, and the median number of previous lines of therapy was two (range, 1-7). The overall response rate was 40% (95% CI, 29 to 51), including three complete responses, with a median duration of response of 11.1 months (95% CI, 6.9 to not reached). The median progression-free survival was 8.3 months (95% CI, 6.5 to 10.9). In the safety population (n = 114), the most common adverse events were rash in 98 patients (86%), infusion-related reactions in 75 (66%), and paronychia in 51 (45%). The most common grade 3-4 adverse events were hypokalemia in six patients (5%) and rash, pulmonary embolism, diarrhea, and neutropenia in four (4%) each. Treatment-related dose reductions and discontinuations were reported in 13% and 4% of patients, respectively. **CONCLUSION:** Amivantamab, via its novel mechanism of action, yielded robust and durable responses with tolerable safety in patients with EGFR Exon20ins mutations after progression on platinum-based chemotherapy.

Indexado en: PubMed/WOS/JCR /JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 44.544

Quartil: 1

Categoría: Oncology

Posición: 4/242

Rosell R, Gonzalez-Cao M.

Cemiplimab monotherapy in advanced non-squamous and squamous non-small cell lung cancer.

Lancet. 2021 Feb 13;397(10274):557-559. doi: 10.1016/S0140-6736(21)00196-3.

Comment on

Lancet. 2021 Feb 13;397(10274):592-604.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 79.321

Quartil: 1

Categoría: Medicine, General & Internal

Posición: 2/169

Sierra-Rodero B, Cruz-Bermúdez A, Nadal E, Garitaonandía Y, Insa A, Mosquera J, Casal-Rubio J, Dómine M, Majem M, Rodríguez-Abreu D, Martínez-Martí A, De Castro Carpeño J, Cobo M, López Vivanco G, Del Barco E, Bernabé Caro R, Viñolas N, Barneto Aranda I, **Viteri S**, Massuti B, Laza-Briviesca R, Casarrubios M, García-Grande A, Romero A, Franco F, Provencio M.

Clinical and molecular parameters associated to pneumonitis development in non-small-cell lung cancer patients receiving chemoimmunotherapy from NADIM trial.

J Immunother Cancer. 2021 Aug;9(8):e002804. doi: 10.1136/jitc-2021-002804.

BACKGROUND: Pneumonitis (Pn) is one of the main immune-related adverse effects, having a special importance in lung cancer, since they share affected tissue. Despite its clinical relevance, Pn development remains an unpredictable treatment adverse effect, whose mechanisms are mainly unknown, being even more obscure when it is associated to chemoimmunotherapy. **METHODS:** In order to identify parameters associated to treatment related Pn, we analyzed clinical variables and molecular parameters from 46 patients with potentially resectable stage IIIA non-small-cell lung cancer treated with neoadjuvant chemoimmunotherapy included in the NADIM clinical trial (NCT03081689). Pn was defined as clinical or radiographic evidence of lung inflammation without alternative diagnoses, from treatment initiation to 180 days. **RESULTS:** Among 46 patients, 12 developed Pn (26.1%). Sex, age, smoking status, packs-year, histological subtype, clinical or pathological response, progression-free survival, overall survival and number of nivolumab cycles, were not associated to Pn development. Regarding molecular parameters at diagnosis, Pn development was not associated to programmed death ligand 1, TPS, T cell receptor repertoire parameters, or tumor mutational burden. However, patients who developed Pn had statistically significant lower blood median levels of platelet to monocyte ratio ($p=0.012$) and teratocarcinoma-derived growth factor 1 ($p=0.013$; area under the curve (AUC) 0.801), but higher median percentages of natural killers (NKs) ($p=0.019$; AUC 0.786), monocytes ($p=0.017$; AUC 0.791), MSP ($p=0.006$; AUC 0.838), PARN ($p=0.017$; AUC 0.790), and E-Cadherin ($p=0.022$; AUC 0.788). In addition, the immune scenario of Pn after neoadjuvant treatment involves: high levels of neutrophils and NK cells, but low levels of B and T cells in peripheral blood; increased clonality of intratumoral T cells; and elevated plasma levels of several growth factors (EGF, HGF, VEGF, ANG-1, PDGF, NGF, and NT4) and inflammatory cytokines (MIF, CCL16, neutrophil gelatinase-associated lipocalin, BMP-4, and u-PAR). **CONCLUSIONS:** Although statistically underpowered, our results shed light on the possible mechanisms behind Pn development, involving innate and adaptive immunity, and open the possibility to predict patients at high risk. If confirmed, this may allow the personalization of both, the surveillance strategy and the therapeutic approaches to manage Pn in patients receiving chemoimmunotherapy.

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Factor Impacto: 13.751 Quartil: 1 Categoría: Immunology; Oncology

Posición: Immunology 8/162; Oncology 15/242

OBSTETRICIA i GINECOLOGIA - SALUT DE LA DONA DEXEUS

Alcazar JL, Carazo P2, Pegenaute L, Gurrea E, Campos I, Neri M, **Pascual MA**, Guerriero S.

Preoperative Assessment of Cervical Involvement in Endometrial Cancer by Transvaginal Ultrasound and Magnetic Resonance Imaging: A Systematic Review and Meta-Analysis.

[Article in English]

Ultraschall Med. 2021 Mar 23. doi: 10.1055/a-1408-2292. Online ahead of print.

OBJECTIVE: To compare the diagnostic accuracy of transvaginal ultrasound (TVS) and magnetic resonance imaging (MRI) for detecting cervical infiltration by endometrial carcinoma using meta-analysis assessment. **METHODS:** An extensive search of papers comparing TVS and MRI for assessing cervical infiltration in endometrial cancer in the same set of patients was performed in Medline (Pubmed), Web of Science, and the Cochrane Database. Quality was assessed using QUADAS-2 tool (Quality Assessment of Diagnostic Accuracy Studies-2). Quantitative meta-analysis was performed. **RESULTS:** Our extended search identified 12 articles that used both techniques in the same set of patients and were included in the meta-analysis. The risk of bias for most studies was high for patient selection and index tests in QUADAS-2. Overall, the pooled estimated sensitivity and specificity for diagnosing cervical infiltration in women with endometrial cancer were identical for both techniques [69% (95% CI, 51%-82%) and 93% (95% CI, 90%-95%) for TVS, and 69% (95% CI, 57%-79%) and 91% (95% CI, 90%-95%) for MRI, respectively]. No statistical differences were found when comparing both methods. Heterogeneity was high for sensitivity and moderate for specificity when analyzing TVS and moderate for both sensitivity and specificity in the case of MRI. **CONCLUSION:** TVS and MRI showed very similar diagnostic performance for diagnosing cervical involvement in women with endometrial cancer.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.548 Quartil: 1

Categoría: Acoustics; Radiology, Nuclear Medicine & Medical Imaging

Posición: Acoustics 3/32; Nuclear Medicine & Medical Imaging 14/134

Álvarez M, Gaggiotti-Marre S, Martínez F, Coll L, García S, González-Foruria I, Rodríguez I, Parriego M, Polyzos NP, Coroleu B.

Individualised luteal phase support in artificially prepared frozen embryo transfer cycles based on serum progesterone levels: a prospective cohort study.

Hum Reprod. 2021 May 17;36(6):1552-1560. doi: 10.1093/humrep/deab031.

STUDY QUESTION: Does an individualised luteal phase support (iLPS), according to serum progesterone (P4) level the day prior to euploid frozen embryo transfer (FET), improve pregnancy outcomes when started on the day previous to embryo transfer? **SUMMARY ANSWER:** Patients with low serum P4 the day prior to euploid FET can benefit from the addition of daily subcutaneous P4 injections (Psc), when started the day prior to FET, and achieve similar reproductive outcomes compared to those with initial adequate P4 levels. **WHAT IS KNOWN ALREADY:** The ratio between FET/IVF has spectacularly increased in the last years mainly thanks to the pursuit of an ovarian hyperstimulation syndrome free clinic and the development of preimplantation genetic testing (PGT). There is currently a big concern regarding the endometrial preparation for FET, especially in relation to serum P4 levels around the time of embryo transfer. Several studies have described impaired pregnancy outcomes in those patients with low P4 levels around the time of FET, considering 10 ng/ml as one of the most accepted reference values. To date, no prospective study has been designed to compare the reproductive

outcomes between patients with adequate P4 the day previous to euploid FET and those with low, but restored P4 levels on the transfer day after iLPS through daily Psc started on the day previous to FET. **STUDY DESIGN, SIZE, DURATION:** A prospective observational study was conducted at a university-affiliated fertility centre between November 2018 and January 2020 in patients undergoing PGT for aneuploidies (PGT-A) IVF cycles and a subsequent FET under hormone replacement treatment (HRT). A total of 574 cycles (453 patients) were analysed: 348 cycles (leading to 342 euploid FET) with adequate P4 on the day previous to FET, and 226 cycles (leading to 220 euploid FET) under iLPS after low P4 on the previous day to FET, but restored P4 levels on the transfer day. **PARTICIPANTS/MATERIALS, SETTING, METHODS:** Overall we included 574 HRT FET cycles (453 patients). Standard HRT was used for endometrial preparation. P4 levels were measured the day previous to euploid FET. P4 > 10.6 ng/ml was considered as adequate and euploid FET was performed on the following day (FET Group 1). P4 < 10.6 ng/ml was considered as low, iLPS was added in the form of daily Psc injections, and a new P4 analysis was performed on the following day. FET was only performed on the same day when a restored P4 > 10.6 ng/ml was achieved (98.2% of cases) (FET Group 2). **MAIN RESULTS AND THE ROLE OF CHANCE:** Patient's demographics and cycle parameters were comparable between both euploid FET groups (FET Group 1 and FET Group 2) in terms of age, weight, oestradiol and P4 levels and number of embryos transferred. No statistically significant differences were found in terms of clinical pregnancy rate (56.4% vs 59.1%: rate difference (RD) -2.7%, 95% CI [-11.4; 6.0]), ongoing pregnancy rate (49.4% vs 53.6%: RD -4.2%, 95% CI [-13.1; 4.7]) or live birth rate (49.1% vs 52.3%: RD -3.2%, 95% CI [-12; 5.7]). No significant differences were also found according to miscarriage rate (12.4% vs 9.2%: RD 3.2%, 95% CI [-4.3; 10.7]). **LIMITATIONS, REASONS FOR CAUTION:** Only iLPS through daily Psc was evaluated. The time for Psc injection was not stated and no serum P4 determinations were performed once the pregnancy was achieved. **WIDER IMPLICATIONS OF THE FINDINGS:** Our study provides information regarding an 'opportunity window' for improved ongoing pregnancy rates and miscarriage rates through a daily Psc injection in cases of inadequate P4 levels the day previous to FET (P4 < 10.6 ng/ml) and restored values the day of FET (P4 > 10.6 ng/ml). Only euploid FET under HRT were considered, avoiding one of the main reasons of miscarriage and implantation failure and overcoming confounding factors such as female age, embryo quality or ovarian stimulation protocols. **STUDY FUNDING/COMPETING INTEREST(S):** No external funding was received. B.C. reports personal fees from MSD, Merck Serono, Ferring Pharmaceuticals, IBSA and Gedeon Richter outside the submitted work. N.P. reports grants and personal fees from MSD, Merck Serono, Ferring Pharmaceuticals, Theramex and Besins International and personal fees from IBSA and Gedeon Richter outside the submitted work. The remaining authors have no conflicts of interest to declare. **TRIAL REGISTRATION NUMBER:** NCT03740568.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.918 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology
Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

Álvarez M, Rodríguez I, Polyzos NP, Coroleu B.

Reply: Individualized luteal phase support in artificially prepared frozen embryo transfer cycles based on serum progesterone levels: a prospective cohort study.

Hum Reprod. 2021 Aug 18;36(9):2623-2624. doi: 10.1093/humrep/deab141.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.918 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology
Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

Engels Calvo V, Cruz Melguizo S, Abascal-Saiz A, Forcén Acebal L, **Sánchez-Migallón A**, Pintado Recarte P, Cuenca Marín C, Marcos Puig B, Del Barrio Fernández PG, Nieto Velasco O, de la Cruz Conty ML, Martínez-Perez O; Spanish Obstetric Emergency Group.

Perinatal outcomes of pregnancies resulting from assisted reproduction technology in SARS-CoV-2-infected women: a prospective observational study.

Fertil Steril. 2021 Sep;116(3):731-740. doi: 10.1016/j.fertnstert.2021.04.005.

Collaborators: Garrido Luque MB, Fernández CF, Yarza AV, Canedo Carballeira EM, Dueñas Carazo MB, Aguilar RR, Sánchez-Vegazo García Á, Silvares EÁ, Pardo Pumar MI, Álvarez-Mallo MA, Carmona VM, Pérez NP, Colomo CÁ, Mateu OA, Di Leo CM, Millán MDCP, García AM, Martínez JN, Fornell AM, Salvador EP, Gómez TM, Meca Casbas MR, Grimalt NF, Aquisé A, Gil MDM, Amorós EC, Sánchez AA, Conca Rodero MI, Oreja Cuesta AB, Aguilar CR, García SF, Gómez MR, Aguilar Galán EV, Pérez RL, Luque CB, Jiménez Losa LM, Pérez SS, Granell Escobar MR, González MD, Blaya FN, Wizner de Alva JC, Carulla RP, Sánchez EC, Rodríguez JC, Antolín EM, Macià M, Pratcorona L, Abásolo IG, Borde BM, Ruiz ÓV, Aragón JR, Seoane RG, González MT, González LM, Heredia CL, Broullón Molanes JR, Gimeno Gimeno MJ, Posadas San Juan AM, Vanegas OG, Fernández Alonso AM, Meca LD, Prieto AP, Martín MDPG, Orizales Lago CM, Sainz Bueno JA, Coello MC, José Núñez Valera M, González LC, García JA, Ferriols-Pérez E, Roqueta M, Encinas Pardilla MB, Sánchez MG, Rodríguez LG, Recarte PP, Paredes EP, Payán PC, Iriarte YF, San Frutos Llorente L.

OBJECTIVE: To evaluate the perinatal and maternal outcomes of pregnancies in women infected with SARS-CoV-2, comparing spontaneous and in vitro fertilization (IVF) pregnancies (with either own or donor oocytes). **DESIGN:** Multicenter, prospective, observational study. **SETTING:** 78 centers participating in the Spanish COVID19 Registry. **PATIENT(S):** 1,347 pregnant women with SARS-CoV-2 positive results registered consecutively between February 26 and November 5, 2020. **INTERVENTION(S):** The patients' information was collected from their medical records, and multivariable regression analyses were performed, controlling for maternal age and the clinical presentation of the infection. **MAIN OUTCOME MEASURE(S):** Obstetrics and neonatal outcomes, pregnancy comorbidities, intensive care unit admission, mechanical ventilation need, and medical conditions. **RESULT(S):** The IVF group included 74 (5.5%) women whereas the spontaneous pregnancy group included 1,275 (94.5%) women. The operative delivery rate was high in all patients, especially in the IVF group, where cesarean section became the most frequent method of delivery (55.4%, compared with 26.1% of the spontaneous pregnancy group). The reason for cesarean section was induction failure in 56.1% of the IVF patients. IVF women had more gestational hypertensive disorders (16.2% vs. 4.5% among spontaneous pregnancy women, adjusted odds ratio [aOR] 5.31, 95% confidence interval [CI] 2.45-10.93) irrespective of oocyte origin. The higher rate of intensive care unit admittance observed in the IVF group (8.1% vs. 2.4% in the spontaneous pregnancy group) was attributed to preeclampsia (aOR 11.82, 95% CI 5.25-25.87), not to the type of conception. **CONCLUSION(S):** A high rate of operative delivery was observed in pregnant women infected with SARS-CoV-2, especially in those with IVF pregnancies; method of conception did not affect fetal or maternal outcomes, except for preeclampsia. **CLINICAL TRIAL REGISTRATION NUMBER:** NCT04558996.

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Factor Impacto: 7.329 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 2/30; Obstetrics & Gynecology 4/83

ESHRE COVID-19 Working Group, Gianaroli L, Ata B, Lundin K, Rautakallio-Hokkanen S, Tapanainen JS, Vermeulen N, **Veiga A**, Mocanu E.

The calm after the storm: re-starting ART treatments safely in the wake of the COVID-19 pandemic.

Hum Reprod. 2021 Jan 25;36(2):275-282. doi: 10.1093/humrep/deaa285.

The coronavirus disease 2019 (COVID-19) pandemic created a significant impact on medically assisted reproduction (MAR) services. ESHRE decided to mobilize resources in order to collect, analyse, monitor, prepare and disseminate severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) knowledge specifically related to ART and early pregnancy. This article presents the impact of the SARS-CoV-2 pandemic focusing on reproductive healthcare. It details the rationale behind the guidance prepared to support MAR services in organizing and managing the re-start of treatments or in case of any future wave of COVID-19 disease. The guidance includes information on patient selection and informed consent, staff and patient triage and testing, adaptation of ART services, treatment planning and code of conduct. The initiatives detailed in this article are not necessarily COVID-specific and such action plans could be applied effectively to manage similar emergency situations in different areas of medicine, in the future.

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Factor Impacto: 6.918

Quartil: 1

Categoria: Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

ESHRE COVID-19 Working Group, Ata B, Gianaroli L, Lundin K, Mcheik S, Mocanu E, Rautakallio-Hokkanen S, Tapanainen JS, Vermeulen N, **Veiga A.**

Outcomes of SARS-CoV-2 infected pregnancies after medically assisted reproduction.

Hum Reprod. 2021 Oct 18;36(11):2883-2890. doi: 10.1093/humrep/deab218.

STUDY QUESTION: What is the impact of SARS-CoV-2 infection on the outcome of a pregnancy after medically assisted reproduction? **SUMMARY ANSWER:** Our results suggest that medically assisted reproduction (MAR) pregnancies are not differentially affected by SARS-CoV-2 infection compared to spontaneous pregnancies. **WHAT IS KNOWN ALREADY:** Information on the effects of COVID-19 on pregnancy after MAR is scarce when women get infected during MAR or early pregnancy, even though such information is vital for informing women seeking pregnancy. **STUDY DESIGN, SIZE, DURATION:** Data from SARS-CoV-2 affected MAR pregnancies were collected between May 2020 and June 2021 through a voluntary data collection, organised by the European Society of Human Reproduction and Embryology (ESHRE). **PARTICIPANTS/MATERIALS, SETTING, METHODS:** All ESHRE members were invited to participate to an online data collection for SARS-CoV-2-infected MAR pregnancies. **MAIN RESULTS AND THE ROLE OF CHANCE:** The dataset includes 80 cases from 32 countries, including 67 live births, 10 miscarriages, 2 stillbirths and 1 maternal death. An additional 25 pregnancies were ongoing at the time of writing. **LIMITATIONS, REASONS FOR CAUTION:** An international data registry based on voluntary contribution can be subject to selective reporting with possible risks of over- or under-estimation. **WIDER IMPLICATIONS OF THE FINDINGS:** The current data can be used to guide clinical decisions in the care of women pregnant after MAR, in the context of the COVID-19 pandemic. **STUDY FUNDING/COMPETING INTEREST(S):** The authors acknowledge the support of ESHRE for the data registry and meetings. JT reports grants or contracts from Sigrid Juselius Foundation, EU and Helsinki University Hospital Funds, outside the scope of the current work. The other authors declare that they have no conflict of interest.

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Factor Impacto: 6.918

Quartil: 1

Categoria: Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

González-Comadran M, Jacquemin B, Cirach M, Lafuente R, Cole-Hunter T, Nieuwenhuijsen M, Brassesco M, **Coroleu B**, Checa MA.

The effect of short term exposure to outdoor air pollution on fertility.

Reprod Biol Endocrinol. 2021 Oct 6;19(1):151. doi: 10.1186/s12958-021-00838-6.

BACKGROUND: There is evidence to suggest that long term exposure to air pollution could be associated with decreased levels of fertility, although there is controversy as to how short term exposure may compromise fertility in IVF patients and what windows of exposure during the IVF process patients could be most vulnerable.

METHODS: This prospective cohort study aimed to evaluate the impact of acute exposure that air pollution have on reproductive outcomes in different moments of the IVF process. Women undergoing IVF living in Barcelona were recruited. Individual air pollution exposures were modelled at their home address 15 and 3 days before embryo transfer (15D and 3D, respectively), the same day of transfer (D0), and 7 days after (D7). The pollutants modelled were: PM_{2.5} [particulate matter (PM) $\leq 2.5 \mu\text{m}$], PMcoarse (PM between 2.5 and 10 μm), PM₁₀ (PM $\leq 10 \mu\text{m}$), PM_{2.5} abs, and NO₂ and NO_x. Outcomes were analyzed using multi-level regression models, with adjustment for co-pollutants and confounding factors. Two sensitivity analyses were performed. First, the model was adjusted for subacute exposure (received 15 days before ET). The second analysis was based on the first transfer performed on each patient aiming to exclude patients who failed previous transfers. **RESULTS:** One hundred ninety-four women were recruited, contributing with data for 486 embryo transfers. Acute and subacute exposure to PMs showed a tendency in increasing miscarriage rate and reducing clinical pregnancy rate, although results were not statistically significant. The first sensitivity analysis, showed a significant risk of miscarriage for PM_{2.5} exposure on 3D after adjusting for subacute exposure, and an increased risk of achieving no pregnancy for PM_{2.5}, PMcoarse and PM₁₀ on 3D. The second sensitivity analysis showed a significant risk of miscarriage for PM_{2.5} exposure on 3D, and a significant risk of achieving no pregnancy for PM_{2.5}, PMcoarse and PM₁₀ particularly on 3D. No association was observed for nitrogen dioxides on reproductive outcomes. **CONCLUSIONS:** Exposure to particulate matter has a negative impact on reproductive outcomes in IVF patients. Subacute exposure seems to increase the harmful effect of the acute exposure on miscarriage and pregnancy rates. Nitrogen dioxides do not modify significantly the reproductive success.

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Factor Impacto: 5.211 **Quartil:** 1 **Categoría:** Endocrinology & Metabolism; Reproductive Biology

Posición: Endocrinology & Metabolism 34/145; Reproductive Biology 4/30

Guerriero S, Martinez L, Gomez I, **Pascual MA**, Ajossa S, Pagliuca M, Alcázar JL.

Diagnostic accuracy of sonography for detecting parametrial involvement in women with pelvic endometriosis: a systematic review and meta-analysis.

Ultrasound Obstet Gynecol. 2021 Aug 6. doi: 10.1002/uog.23754. Online ahead of print.

OBJECTIVE: The aim of this meta-analysis is to evaluate the diagnostic accuracy of transvaginal ultrasonography (TVS) to detect parametrial endometriosis, using laparoscopy as the reference standard. **METHODS:** A search for studies evaluating the TVS for assessing parametrial endometriosis compared to surgery from January 2000 to December 2020 was performed in PubMed/MEDLINE and Web of Science. The Quality Assessment of Diagnostic Accuracy Studies 2 evaluated the quality of the studies (QUADAS-2). All analyses were performed using MIDAS and METANDI commands. **RESULTS:** We identified 133 citations. Finally, four studies comprising 560 patients were included. Mean prevalence of parametrial endometriosis was 17%. Overall, the pooled estimated sensitivity, specificity, positive likelihood, and negative likelihood ratio of TVS for detecting parametrial endometriosis were 31% (95% confidence interval [CI]= 10% -64%), 98% (95% CI= 95%-99%), 18.5 (95% CI= 8.8-38.9), 0.70 (95% CI=0.46-1.06), respectively. Diagnostic odds ratio (DOR) was 26 (95% CI=10-68). Heterogeneity was high. The visualization of a lesion suspected to be parametrial endometriosis increases significantly the

pretest probability of parametrial endometriosis at laparoscopy. **CONCLUSIONS:** The use of TVS for the detection of parametrial endometriosis have a high specificity but a low sensitivity. This article is protected by copyright. All rights reserved.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 7.299

Quartil: 1

Categoría: Acoustics; Radiology; Nuclear Medicine & Medical Imaging

Posición: Radiology, Nuclear Medicine & Medical Imaging 10/134; Acoustics 2/32

Martínez F, Racca A, Rodríguez I, Polyzos NP.

Ovarian stimulation for oocyte donation: a systematic review and meta-analysis.

Hum Reprod Update. 2021 Jun 22;27(4):673-696. doi: 10.1093/humupd/dmab008.

BACKGROUND: Since its introduction in the 1980s, oocyte donation (OD) has been largely integrated into ART. Lately, both demand and the indications for OD have increased greatly. Oocyte donors are healthy and potentially fertile women undergoing voluntarily ovarian stimulation (OS). Selection of the optimal type of stimulation is of paramount importance in order to achieve the most favourable outcomes for the oocyte recipients, but most importantly for the safety of the oocyte donors. **OBJECTIVE AND RATIONALE:** This is the first systematic review (SR) with the objective to summarize the current evidence on OS in oocyte donors. The scope of this SR was to evaluate the OD programme by assessing four different aspects: how to assess the ovarian response prior to stimulation; how to plan the OS (gonadotrophins; LH suppression; ovulation trigger; when to start OS); how to control for the risk of ovarian hyperstimulation syndrome (OHSS) and other complications; and the differences between the use of fresh versus vitrified donated oocytes. **SEARCH METHODS:** A systematic literature search was conducted in May 2020, according to PRISMA guidelines in the databases PubMed and Embase, using a string that combined synonyms for oocytes, donation, banking, freezing, complications and reproductive outcomes. Studies reporting on the safety and/or efficacy of OS in oocyte donors were identified. The quality of the included studies was assessed using ROBINS-I and ROB2. Meta-analysis was performed where appropriate. Data were combined to calculate mean differences (MD) for continuous variables and odd ratios (OR) for binary data with their corresponding 95% CIs. Heterogeneity between the included studies was assessed using I² and tau statistics. **OUTCOMES:** In total, 57 manuscripts were selected for the review, out of 191 citations identified. Antral follicle count and anti-Müllerian hormone levels correlate with ovarian response to OS in OD but have limited value to discriminate donors who are likely to show either impaired or excessive response. Five randomized controlled trials compared different type of gonadotrophins as part of OS in oocyte donors; owing to high heterogeneity, meta-analysis was precluded. When comparing different types of LH control, namely GnRH antagonist versus agonist, the studies showed no differences in ovarian response. Use of progesterone primed ovarian stimulation protocols has been evaluated in seven studies: the evidence has shown little or no difference, compared to GnRH antagonist protocols, in mean number of retrieved oocytes (MD 0.23, [95% CI 0.58-1.05], n = 2147; 6 studies; I² = 13%, P = 0.33) and in clinical pregnancy rates among recipients (OR 0.87 [95% CI 0.60-1.26], n = 2260, I² = 72%, P < 0.01). There is insufficient evidence on long-term safety for babies born. GnRH agonist triggering is the gold standard and should be used in all oocyte donors, given the excellent oocyte retrieval rates, the practical elimination of OHSS and no differences in pregnancy rates in recipients (four studies, OR 0.86, 95%CI 0.58-1.26; I² = 0%). OS in OD is a safe procedure with a low rate of hospitalization after oocyte retrieval. The use of a levonorgestrel intrauterine device or a progestin contraceptive pill during OS does not impact the number of oocytes retrieved or the clinical pregnancy rate in recipients. Ultrasound monitoring seems enough for an adequate follow up of the stimulation cycle in OD. Use of fresh versus vitrified donated oocytes yielded similar pregnancy outcomes. **WIDER IMPLICATIONS:** This update will be helpful in the clinical management of OS in OD based on the most recent knowledge and recommendations, and possibly in the management of women under 35 years undergoing oocyte vitrification for social freezing, owing to the population similarities. More clinical research is

needed on OS protocols that are specifically designed for OD, especially in term of the long-term safety for newborns, effective contraception during OS, and treatment satisfaction.

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Factor Impacto: 15.610 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 1/30; Obstetrics & Gynecology 1/83

Montoya-Botero P, Martinez F, Rodríguez-Purata J, Rodríguez I, Coroleu B, Polyzos NP.

Erratum. The effect of type of oral contraceptive pill and duration of use on fresh and cumulative live birth rates in IVF/ICSI cycles.

Hum Reprod. 2021 Mar 18;36(4):1159-1161. doi: 10.1093/humrep/deaa358.

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Factor Impacto: 6.918 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

Ojosnegros S, Seriola A, Godeau AL, **Veiga A.**

Embryo implantation in the laboratory: an update on current techniques.

Hum Reprod Update. 2021 Apr 21;27(3):501-530. doi: 10.1093/humupd/dmaa054.

BACKGROUND: The embryo implantation process is crucial for the correct establishment and progress of pregnancy. During implantation, the blastocyst trophoblast cells attach to the epithelium of the endometrium, triggering intense cell-to-cell crosstalk that leads to trophoblast outgrowth, invasion of the endometrial tissue, and formation of the placenta. However, this process, which is vital for embryo and foetal development in utero, is still elusive to experimentation because of its inaccessibility. Experimental implantation is cumbersome and impractical in adult animal models and is inconceivable in humans. **OBJECTIVE AND RATIONALE:** A number of custom experimental solutions have been proposed to recreate different stages of the implantation process in vitro, by combining a human embryo (or a human embryo surrogate) and endometrial cells (or a surrogate for the endometrial tissue). In vitro models allow rapid high-throughput interrogation of embryos and cells, and efficient screening of molecules, such as cytokines, drugs, or transcription factors, that control embryo implantation and the receptivity of the endometrium. However, the broad selection of available in vitro systems makes it complicated to decide which system best fits the needs of a specific experiment or scientific question. To orient the reader, this review will explore the experimental options proposed in the literature, and classify them into amenable categories based on the embryo/cell pairs employed. The goal is to give an overview of the tools available to study the complex process of human embryo implantation, and explain the differences between them, including the advantages and disadvantages of each system. **SEARCH METHODS:** We performed a comprehensive review of the literature to come up with different categories that mimic the different stages of embryo implantation in vitro, ranging from initial blastocyst apposition to later stages of trophoblast invasion or gastrulation. We will also review recent breakthrough advances on stem cells and organoids, assembling embryo-like structures and endometrial tissues. **OUTCOMES:** We highlight the most relevant systems and describe the most significant experiments. We focus on in vitro systems that have contributed to the study of human reproduction by discovering molecules that control implantation, including hormones, signalling molecules, transcription factors and cytokines. **WIDER IMPLICATIONS:** The momentum of this field is growing thanks to the use of stem cells to build embryo-like structures and endometrial tissues, and the use of bioengineering to extend the life of embryos in culture. We propose to merge bioengineering

methods derived from the fields of stem cells and reproduction to develop new systems covering a wider window of the implantation process.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 15.610 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 1/30; Obstetrics & Gynecology 1/83

Peguero A, Herraiz I, Perales A, Melchor JC, Melchor I, Marcos B, Villalain C, Martinez-Portilla R, Mazarico E, **Meler E**, Hernandez S, Matas I, Del Rio M, Galindo A, Figueras F.

Placental growth factor testing in the management of late preterm preeclampsia without severe features: a multicenter, randomized, controlled trial.

Am J Obstet Gynecol. 2021 Sep;225(3):308.e1-308.e14. doi: 10.1016/j.ajog.2021.03.044.

BACKGROUND: In women with late preterm preeclampsia, the optimal time for delivery remains a controversial topic, because of the fine balance between the maternal benefits from early delivery and the risks for prematurity. It remains challenging to define prognostic markers to identify women at highest risk for complications, in which case a selective, planned delivery may reduce the adverse maternal and perinatal outcomes. **OBJECTIVE:** This trial aimed to determine whether using an algorithm based on the maternal levels of placental growth factor in women with late preterm preeclampsia to evaluate the best time for delivery reduced the progression to preeclampsia with severe features without increasing the adverse perinatal outcomes. **STUDY DESIGN:** This parallel-group, open-label, multicenter, randomized controlled trial was conducted at 7 maternity units across Spain. We compared selective planned deliveries based on maternal levels of placental growth factor at admission (revealed group) and expectant management under usual care (concealed group) with individual randomization in singleton pregnancies with late preterm preeclampsia from 34 to 36+6 weeks' gestation. The coprimary maternal outcome was the progression to preeclampsia with severe features. The coprimary neonatal outcome was morbidity at infant hospital discharge with a noninferiority hypothesis (noninferiority margin of 10% difference in incidence). Analyses were conducted according to intention-to-treat. **RESULTS:** Between January 1, 2016, and December 31, 2019, 178 women were recruited. Of those women, 88 were assigned to the revealed group and 90 were assigned to the concealed group. The data analysis was performed before the completion of the required sample size. The proportion of women with progression to preeclampsia with severe features was significantly lower in the revealed group than in the concealed group (adjusted relative risk, 0.5; 95% confidence interval, 0.33-0.76; P=.001). The proportion of infants with neonatal morbidity was not significantly different between groups (adjusted relative risk, 0.77; 95% confidence interval, 0.39-1.53; P=.45). **CONCLUSION:** There is evidence to suggest that the use of an algorithm based on placental growth factor levels in women with late preterm preeclampsia leads to a lower rate of progression to preeclampsia with severe features and reduces maternal complications without worsening the neonatal outcomes. This trade-off should be discussed with women with late preterm preeclampsia to allow shared decision making about the timing of delivery.

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Factor Impacto: 8.661 **Quartil:** 1 **Categoría:** Obstetrics & Gynecology

Posición: 2/83

Polyzos NP, Popovic Todorovic B.

Reply: The evergreen conundrum of poor response: is the dose really irrelevant?

Hum Reprod. 2021 Mar 18;36(4):1157-1158. doi: 10.1093/humrep/deab005.

Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 6.918

Quartil: 1

Categoría: Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

Polyzos NP, Neves AR, Drakopoulos P, Spits C, Alvaro Mercadal B, **Garcia S**, Ma PQM, Le LH, Ho MT, Mertens J, Stoop D, Tournaye H, Vuong NL.

The effect of polymorphisms in FSHR and FSHB genes on ovarian response: a prospective multicenter multinational study in Europe and Asia.

Hum Reprod. 2021 May 17;36(6):1711-1721. doi: 10.1093/humrep/deab068.

STUDY QUESTION: Does the presence of single nucleotide polymorphisms (SNPs) in the FSH receptor gene (FSHR) and/or FSH beta subunit-encoding gene (FSHB) influence ovarian response in predicted normal responders treated with rFSH? **SUMMARY ANSWER:** The presence of FSHR SNPs (rs6165, rs6166, rs1394205) has a statistically significant impact in ovarian response, although this effect is of minimal clinical relevance in predicted normal responders treated with a fixed dose of 150 IU rFSH. **WHAT IS KNOWN ALREADY:** Ovarian reserve markers have been a breakthrough in response prediction following ovarian stimulation. However, a significant percentage of patients show a disproportionate lower ovarian response, as compared with their actual ovarian reserve. Studies on pharmacogenetics have demonstrated a relationship between FSHR or FSHB genotyping and drug response, suggesting a potential effect of individual genetic variability on ovarian stimulation. However, evidence from these studies is inconsistent, due to the inclusion of patients with variable ovarian reserve, use of different starting gonadotropin doses, and allowance for dose adjustments during treatment. This highlights the necessity of a well-controlled prospective study in a homogenous population treated with the same fixed protocol. **STUDY DESIGN, SIZE, DURATION:** We conducted a multicenter multinational prospective study, including 368 patients from Vietnam, Belgium, and Spain (168 from Europe and 200 from Asia), from November 2016 until June 2019. All patients underwent ovarian stimulation followed by oocyte retrieval in an antagonist protocol with a fixed daily dose of 150 IU rFSH until triggering. Blood sampling and DNA extraction was performed prior to oocyte retrieval, followed by genotyping of four SNPs from FSHR (rs6165, rs6166, rs1394205) and FSHB (rs10835638). **PARTICIPANTS/MATERIALS, SETTING, METHODS:** Eligible were predicted normal responder women <38 years old undergoing their first or second ovarian stimulation cycle. Laboratory staff and clinicians were blinded to the clinical results and genotyping, respectively. The prevalence of hypo-responders, the number of oocytes retrieved, the follicular output rate (FORT), and the follicle to oocyte index (FOI) were compared between different FSHR and FSHB SNPs genotypes. **MAIN RESULTS AND THE ROLE OF CHANCE:** The prevalence of derived allele homozygous SNPs in the FSHR was rs6166 (genotype G/G) 15.8%, rs6165 (genotype G/G) 34.8%, and rs1394205 (genotype A/A) 14.1%, with significant differences between Caucasian and Asian women ($P < 0.001$). FSHB variant rs10835638 (c.-211 G>T) was very rare (0.5%). Genetic model analysis revealed that the presence of the G allele in FSHR variant rs6166 resulted in less oocytes retrieved when compared to the AA genotype (13.54 ± 0.46 vs 14.81 ± 0.61 , estimated mean difference (EMD) -1.47 (95% CI -2.82 to -0.11)). In FSHR variant rs1394205, a significantly lower number of oocytes was retrieved in patients with an A allele when compared to G/G (13.33 ± 0.41 vs 15.06 ± 0.68 , EMD -1.69 (95% CI -3.06 to -0.31)). A significantly higher prevalence of hypo-responders was found in patients with the genotype A/G for FSHR variant rs6166 (55.9%, $n = 57$) when compared to A/A (28.4%, $n = 29$), ORadj 1.87 (95% CI 1.08-3.24). No significant differences were found regarding the FORT across the genotypes for FSHR variants rs6166, rs6165, or rs1394205. Regarding the FOI, the presence of the G allele for FSHR variant rs6166 resulted in a lower FOI when compared to the A/A genotype, EMD -13.47 (95% CI -22.69 to -4.24). Regarding FSHR variant rs6165, a lower FOI was reported for genotype A/G (79.75 ± 3.35) when compared to genotype A/A (92.08 ± 6.23), EMD -13.81 (95% CI -25.41 to -2.21). **LIMITATIONS, REASONS FOR CAUTION:** The study was

performed in relatively young women with normal ovarian reserve to eliminate biases related to age-related fertility decline; thus, caution is needed when extrapolating results to older populations. In addition, no analysis was performed for FSHB variant rs10835638 due to the very low prevalence of the genotype T/T (n = 2). **WIDER IMPLICATIONS OF THE FINDINGS:** Based on our results, genotyping FSHR SNPs rs6165, rs6166, rs1394205, and FSHB SNP rs10835638 prior to initiating an ovarian stimulation with rFSH in predicted normal responders should not be recommended, taking into account the minimal clinical impact of such information in this population. Future research may focus on other populations and other genes related to folliculogenesis or steroidogenesis. **STUDY FUNDING/COMPETING INTEREST(S):** This study was supported by an unrestricted grant by Merck Sharp & Dohme (MSD). N.P.P. reports grants and/or personal fees from MSD, Merck Serono, Roche Diagnostics, Ferring International, Besins Healthcare, Gedeon Richter, Theramex, and Institut Biochimique SA (IBSA). N.L.V. and M.T.H. report consultancy and conference fees from Merck, Ferring, and MSD, outside the submitted work. P.D. has received honoraria for lecturing and/or research grants from MSD, Ferring International, and Merck. D.S. reports grants and/or personal fees from MSD, Ferring International, Merck Serono, Cook, and Gedeon Richter. A.R.N., B.A.M., C.S., J.M., L.H.L., P.Q.M.M., H.T., and S.G. report no conflict of interests. TRIAL REGISTRATION NUMBER: NCT03007043.

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Factor Impacto: 6.918

Quartil: 1

Categoria: Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

Racca A, Vanni VS, Somigliana E, Reschini M, Viganò P, Santos-Ribeiro S, Drakopoulos P, Tournaye H, Verheyen G, Papaleo E, Candiani M, Blockeel C.

Is a freeze-all policy the optimal solution to circumvent the effect of late follicular elevated progesterone? A multicentric matched-control retrospective study analysing cumulative live birth rate in 942 non-elective freeze-all cycles.

Hum Reprod. 2021 Aug 18;36(9):2463-2472. doi: 10.1093/humrep/deab160.

STUDY QUESTION: Is late follicular elevated progesterone (LFEP) in the fresh cycle hindering cumulative live birth rates (CLBRs) when a freeze only strategy is applied? **SUMMARY ANSWER:** LFEP in the fresh cycle does not affect the CLBR of the frozen transfers in a freeze only approach, nor the embryo freezing rate. **WHAT IS KNOWN ALREADY:** Ovarian stimulation promotes the production of progesterone (P) which has been demonstrated to have a deleterious effect on IVF outcomes. While there is robust evidence that this elevation produces impaired endometrial receptivity, the impact on embryo quality remains a matter of debate. In particular, previous studies have shown that LFEP is associated with a hindered CLBR. However, most clinical insight on the effect of progesterone on embryo quality in terms of CLBRs have focused on embryo transfers performed after the fresh transfer, thus excluding the first embryo of the cohort. To be really informative on the possible detrimental effects of LFEP, evidence should be derived from freeze-all cycles where no fresh embryo transfer is performed in the presence of progesterone elevation, and the entire cohort of embryos is cryopreserved. **STUDY DESIGN, SIZE, DURATION:** This was a matched case-control, multicentre (three centres), retrospective analysis including all GnRH antagonist ICSI cycles in which a freeze all (FA) policy of embryos on day 3/5/6 of embryonic development was applied between 2012 and 2018. A total of 942 patients (471 cases with elevated P and 471 matched controls with normal P values) were included in the analysis. Each patient was included only once. **PARTICIPANTS/MATERIALS, SETTING, METHODS:** The sample was divided according to the following P levels on the day of ovulation triggering: <1.50 ng/ml and ≥1.50 ng/ml. The matching of the controls was performed according to age (±1 year) and number of oocytes retrieved (±10%). The main outcome was CLBR defined as a live-born delivery after 24 weeks of gestation. **MAIN RESULTS AND THE ROLE OF CHANCE:** The

baseline characteristics of the two groups were similar. Estradiol levels on the day of trigger were significantly higher in the elevated P group. There was no significant difference in terms of fertilisation rate between the two groups. The elevated P group had significantly more cleavage stage frozen embryos compared to the normal P group while the total number of cryopreserved blastocyst stage embryos was the same. The CLBR did not differ between the two study groups (29.3% and 28.2% in the normal versus LFEP respectively, $P = 0.773$), also following confounder adjustment using multivariable GEE regression analysis (accounting for age at oocyte retrieval, total dose of FSH, progesterone levels on the day of ovulation trigger, day of freezing, at least one top-quality embryo transferred and number of previous IVF cycles, as the independent variables). **LIMITATIONS, REASONS FOR CAUTION:** This is a multicentre observational study based on a retrospective data analysis. Better extrapolation of the results could be validated by performing a prospective analysis. **WIDER IMPLICATIONS OF THE FINDINGS:** This is the first study demonstrating that LFEP in the fresh cycle does not hinder CLBR of the subsequent frozen cycles in a FA approach. Thus, a FA strategy circumvents the issue of elevated P in the late follicular phase. **STUDY FUNDING/COMPETING INTEREST(S):** No funding was received for this study. Throughout the study period and manuscript preparation, authors were supported by departmental funds from: Centre for Reproductive Medicine, Brussels, Belgium; Infertility Unit, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan, Italy; Centro Scienze Natalità, San Raffaele Scientific Institute, Milan, Italy; and IVI-RMA, Lisbon, Portugal. E.S. has competing interests with Ferring, Merck-Serono, Theramex and Gedeon-Richter outside the submitted work. E.P. reports grants from Ferring, grants and personal fees from Merck-Serono, grants and personal fees from MSD and grants from IBSA outside the submitted work. All the other authors have no conflicts of interest to declare. TRIAL REGISTRATION NUMBER: N/A.

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Factor Impacto: 6.918 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

Racca A, Polyzos NP.

DuoStim: are we really comparing follicular phase with luteal phase stimulations?

Hum Reprod. 2021 May 17;36(6):1722-1723. doi: 10.1093/humrep/deab017.

Comment in

Hum Reprod. 2021 May 17;36(6):1723-1724.

Comment on

Hum Reprod. 2020 Nov 1;35(11):2598-2608.

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Factor Impacto: 6.918 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology

Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

Sladkevicius P, Jokubkiene L, Timmerman D, Fischerova D, Van Holsbeke C, Franchi D, Savelli L, Epstein E, Fruscio R, Kaijser J, Czekierdowski A, Guerriero S, **Pascual MA**, Testa AC, Ameye L, Valentin L.

Vessel morphology depicted by three-dimensional power Doppler ultrasound as second-stage test in adnexal tumors that are difficult to classify: prospective diagnostic accuracy study.

Ultrasound Obstet Gynecol. 2021 Feb;57(2):324-334. doi: 10.1002/uog.22191.

OBJECTIVES: To assess whether vessel morphology depicted by three-dimensional (3D) power Doppler ultrasound improves discrimination between benignity and malignancy if used as a second-stage test in adnexal masses that are difficult to classify. **METHODS:** This was a prospective observational international multicenter diagnostic accuracy study. Consecutive patients with an adnexal mass underwent standardized transvaginal two-dimensional (2D) grayscale and color or power Doppler and 3D power Doppler ultrasound examination by an experienced examiner, and those with a 'difficult' tumor were included in the current analysis. A difficult tumor was defined as one in which the International Ovarian Tumor Analysis (IOTA) logistic regression model-1 (LR-1) yielded an ambiguous result (risk of malignancy, 8.3% to 25.5%), or as one in which the ultrasound examiner was uncertain regarding classification as benign or malignant when using subjective assessment. Even when the ultrasound examiner was uncertain, he/she was obliged to classify the tumor as most probably benign or most probably malignant. For each difficult tumor, one researcher created a 360° rotating 3D power Doppler image of the vessel tree in the whole tumor and another of the vessel tree in a 5-cm³ spherical volume selected from the most vascularized part of the tumor. Two other researchers, blinded to the patient's history, 2D ultrasound findings and histological diagnosis, independently described the vessel tree using predetermined vessel features. Their agreed classification was used. The reference standard was the histological diagnosis of the mass. The sensitivity of each test for discriminating between benign and malignant difficult tumors was plotted against 1 - specificity on a receiver-operating-characteristics diagram, and the test with the point furthest from the reference line was considered to have the best diagnostic ability. **RESULTS:** Of 2403 women with an adnexal mass, 376 (16%) had a difficult mass. Ultrasound volumes were available for 138 of these cases. In 79/138 masses, the ultrasound examiner was uncertain about the diagnosis based on subjective assessment, in 87/138, IOTA LR-1 yielded an ambiguous result and, in 28/138, both methods gave an uncertain result. Of the masses, 38/138 (28%) were malignant. Among tumors that were difficult to classify as benign or malignant by subjective assessment, the vessel feature 'densely packed vessels' had the best discriminative ability (sensitivity 67% (18/27), specificity 83% (43/52)) and was slightly superior to subjective assessment (sensitivity 74% (20/27), specificity 60% (31/52)). In tumors in which IOTA LR-1 yielded an ambiguous result, subjective assessment (sensitivity 82% (14/17), specificity 79% (55/70)) was superior to the best vascular feature, i.e. changes in the diameter of vessels in the whole tumor volume (sensitivity 71% (12/17), specificity 69% (48/70)). **CONCLUSION:** Vessel morphology depicted by 3D power Doppler ultrasound may slightly improve discrimination between benign and malignant adnexal tumors that are difficult to classify by subjective ultrasound assessment. For tumors in which the IOTA LR-1 model yields an ambiguous result, subjective assessment is superior to vessel morphology as a second-stage test. © 2020 The Authors. *Ultrasound in Obstetrics & Gynecology* published by John Wiley & Sons Ltd on behalf of International Society of Ultrasound in Obstetrics and Gynecology.

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Factor Impacto: 7.299

Quartil: 1

Categoria: Acoustics; Radiology; Nuclear Medicine & Medical Imaging

Posición: Radiology, Nuclear Medicine & Medical Imaging 10/134; Acoustics 2/32

Santos-Ribeiro S, Mackens S, Popovic-Todorovic B, **Racca A**, **Polyzos NP**, Van Landuyt L, Drakopoulos P, de Vos M, Tournaye H, Blockeel C.

The freeze-all strategy versus agonist triggering with low-dose hCG for luteal phase support in IVF/ICSI for high responders: a randomized controlled trial.

Hum Reprod. 2020 Dec 1;35(12):2808-2818. doi: 10.1093/humrep/deaa226.

Comment in

Hum Reprod. 2020 Dec 1;35(12):2660-2662.

STUDY QUESTION: Does the freeze-all strategy in high-responders increase pregnancy rates and improve safety outcomes when compared with GnRH agonist triggering followed by low-dose hCG intensified luteal support with a fresh embryo transfer?**SUMMARY ANSWER:** Pregnancy rates after either fresh embryo transfer with intensified luteal phase support using low-dose hCG or the freeze-all strategy did not vary significantly; however, moderate-to-severe ovarian hyperstimulation syndrome (OHSS) occurred more frequently in the women who attempted a fresh embryo transfer.**WHAT IS KNOWN ALREADY:** Two strategies following GnRH agonist triggering (the freeze-all approach and a fresh embryo transfer attempt using a low-dose of hCG for intensified luteal phase support) are safer alternatives when compared with conventional hCG triggering with similar pregnancy outcomes. However, these two strategies have never been compared head-to-head in an unrestricted predicted hyper-responder population.**STUDY DESIGN, SIZE, DURATION:** This study included women with an excessive response to ovarian stimulation (≥ 18 follicles measuring ≥ 11 mm) undergoing IVF/ICSI in a GnRH antagonist suppressed cycle between 2014 and 2017. Our primary outcome was clinical pregnancy at 7 weeks after the first embryo transfer. Secondary outcomes included live birth and the development of moderate-to-severe OHSS.**PARTICIPANTS/MATERIALS, SETTING, METHODS:** Following GnRH agonist triggering, women were randomized either to cryopreserve all good-quality embryos followed by a frozen embryo transfer in an subsequent artificial cycle or to perform a fresh embryo transfer with intensified luteal phase support (1500 IU hCG on the day of oocyte retrieval, plus oral estradiol 2 mg two times a day, plus 200 mg of micronized vaginal progesterone three times a day).**MAIN RESULTS AND THE ROLE OF CHANCE:** A total of 212 patients (106 in each arm) were recruited in the study, with three patients (one in the fresh embryo transfer group and two in the freeze-all group) later withdrawing their consent to participate in the study. One patient in the freeze-all group became pregnant naturally (clinical pregnancy diagnosed 38 days after randomization) prior to the first frozen embryo transfer. The study arms did not vary significantly in terms of the number of oocytes retrieved and embryos produced/transferred. The intention to treat clinical pregnancy and live birth rates (with the latter excluding four cases lost to follow-up: one in the fresh transfer and three in the freeze-all arms, respectively) after the first embryo transfer did not vary significantly among the fresh embryo transfer and freeze-all study arms: 51/105 (48.6%) versus 57/104 (54.8%) and 41/104 (39.4%) versus 42/101 (41.6%), respectively (relative risk for clinical pregnancy 1.13, 95% CI 0.87-1.47; $P = 0.41$). However, moderate-to-severe OHSS occurred solely in the group that received low-dose hCG (9/105, 8.6%, 95% CI 3.2% to 13.9% vs 0/104, 95% CI 0 to 3.7, $P < 0.01$).**LIMITATIONS, REASONS FOR CAUTION:** The sample size calculation was based on a 19% absolute difference in terms of clinical pregnancy rates, therefore smaller differences, as observed in the trial, cannot be reliably excluded as non-significant.**WIDER IMPLICATIONS OF THE FINDINGS:** This study offers the first comparative analysis of two common strategies applied to women performing IVF/ICSI with a high risk to develop OHSS. While pregnancy rates did not vary significantly, a fresh embryo transfer with intensified luteal phase support may still not avoid the risk of moderate-to-severe OHSS and serious consideration should be made before recommending it as a routine first-line treatment. Future trials may allow us to confirm these findings.**STUDY FUNDING/COMPETING INTEREST(S):** The authors have no conflicts of interest to disclose. No external funding was obtained for this study.**TRIAL REGISTRATION NUMBER:** ClinicalTrials.gov identifier NCT02148393.**TRIAL REGISTRATION DATE:** 28 May 2014.**DATE OF FIRST PATIENT'S ENROLMENT:** 30 May 2014.

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Factor Impacto: 6.918 **Quartil:** 1 **Categoría:** Reproductive Biology; Obstetrics & Gynecology
Posición: Reproductive Biology 3/30; Obstetrics & Gynecology 6/83

Susak H, Serra-Saurina L, Demidov G, Rabionet R, Domènech L, Bosio M, Muyas F, Estivill X, Escaramís G, Ossowski S.

Efficient and flexible Integration of variant characteristics in rare variant association studies using integrated nested Laplace approximation.

PLoS Comput Biol. 2021 Feb 19;17(2):e1007784. doi: 10.1371/journal.pcbi.1007784. eCollection 2021 Feb.

Rare variants are thought to play an important role in the etiology of complex diseases and may explain a significant fraction of the missing heritability in genetic disease studies. Next-generation sequencing facilitates the association of rare variants in coding or regulatory regions with complex diseases in large cohorts at genome-wide scale. However, rare variant association studies (RVAS) still lack power when cohorts are small to medium-sized and if genetic variation explains a small fraction of phenotypic variance. Here we present a novel Bayesian rare variant Association Test using Integrated Nested Laplace Approximation (BATI). Unlike existing RVAS tests, BATI allows integration of individual or variant-specific features as covariates, while efficiently performing inference based on full model estimation. We demonstrate that BATI outperforms established RVAS methods on realistic, semi-synthetic whole-exome sequencing cohorts, especially when using meaningful biological context, such as functional annotation. We show that BATI achieves power above 70% in scenarios in which competing tests fail to identify risk genes, e.g. when risk variants in sum explain less than 0.5% of phenotypic variance. We have integrated BATI, together with five existing RVAS tests in the 'Rare Variant Genome Wide Association Study' (rvGWAS) framework for data analyzed by whole-exome or whole genome sequencing. rvGWAS supports rare variant association for genes or any other biological unit such as promoters, while allowing the analysis of essential functionalities like quality control or filtering. Applying rvGWAS to a Chronic Lymphocytic Leukemia study we identified eight candidate predisposition genes, including EHMT2 and COPS7A.

Indexado en: PubMed/WOS/JCR/JCI/ Science Citation Index Expanded (SCIE)

Factor Impacto: 4.475 **Quartil:** 1 **Categoría:** Biochemical Research Methods; Mathematical & Computational Biology

Posición: Biochemical Research Methods 16/78; Mathematical & Computational Biology 8/58

Van Den Bosch T, Verbakel JY, Valentin L, Wynants L, De Cock B, Pascual MA, Leone FPG, Sladkevicius P, Alcazar JL, Votino A, Fruscio R, Lanzani C, Van Holsbeke C, Rossi A, Jokubkiene L, Kudla M, Jakab A, Domali E, Epstein E, Van Pachterbeke C, Bourne T, Van Calster B, Timmerman D.

Typical ultrasound features of various endometrial pathologies described using International Endometrial Tumor Analysis (IETA) terminology in women with abnormal uterine bleeding.

Ultrasound Obstet Gynecol. 2021 Jan;57(1):164-172. doi: 10.1002/uog.22109.

OBJECTIVE: To describe the ultrasound features of different endometrial and other intracavitary pathologies in pre- and postmenopausal women presenting with abnormal uterine bleeding, using the International Endometrial Tumor Analysis (IETA) terminology. **METHODS:** This was a prospective observational multicenter study of consecutive women presenting with abnormal uterine bleeding. Unenhanced sonography with color Doppler and fluid-instillation sonography were performed. Endometrial sampling was performed according to each center's local protocol. The histological endpoints were cancer, atypical endometrial hyperplasia/endometrioid intraepithelial neoplasia (EIN), endometrial atrophy, proliferative or secretory endometrium, endometrial hyperplasia without atypia, endometrial polyp, intracavitary leiomyoma and other. For fluid-instillation sonography, the histological endpoints were endometrial polyp, intracavitary leiomyoma and cancer. For each histological endpoint, we report typical ultrasound features using the IETA terminology. **RESULTS:** The database consisted of 2856 consecutive women presenting with abnormal uterine bleeding. Unenhanced sonography with color Doppler was performed in all cases and fluid-instillation sonography in 1857. In 2216 women, endometrial histology was available, and these comprised the study population. Median age was 49 years (range, 19-92 years), median parity was 2 (range, 0-10) and median body mass index was 24.9 kg/m² (range, 16.0-72.1 kg/m²). Of the study population, 843 (38.0%) women were postmenopausal.

Endometrial polyps were diagnosed in 751 (33.9%) women, intracavitary leiomyomas in 223 (10.1%) and endometrial cancer in 137 (6.2%). None (0% (95% CI, 0.0-5.5%)) of the 66 women with endometrial thickness < 3 mm had endometrial cancer or atypical hyperplasia/EIN. Endometrial cancer or atypical hyperplasia/EIN was found in three of 283 (1.1% (95% CI, 0.4-3.1%)) endometria with a three-layer pattern, in three of 459 (0.7% (95% CI, 0.2-1.9%)) endometria with a linear endometrial midline and in five of 337 (1.5% (95% CI, 0.6-3.4%)) cases with a single vessel without branching on unenhanced ultrasound. **CONCLUSIONS:** The typical ultrasound features of endometrial cancer, polyps, hyperplasia and atrophy and intracavitary leiomyomas, are described using the IETA terminology. The detection of some easy-to-assess IETA features (i.e. endometrial thickness < 3 mm, three-layer pattern, linear midline and single vessel without branching) makes endometrial cancer unlikely. Copyright © 2020 ISUOG. Published by John Wiley & Sons Ltd.

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Indexado en: PubMed/WOS/JCR/JCI/Science Citation Index Expanded (SCIE)

Factor Impacto: 7.299

Quartil: 1

Categoría: Acoustics; Radiology; Nuclear Medicine & Medical Imaging

Posición: Radiology, Nuclear Medicine & Medical Imaging 10/134; Acoustics 2/32

Índice-H HUDQ Global

87
H-Index

Publications

3,907

Total

From 1900 to 2022

Citing Articles

41,596 Analyze

Total

40,722 Analyze

Without self-citations

Times Cited

48,799

Total

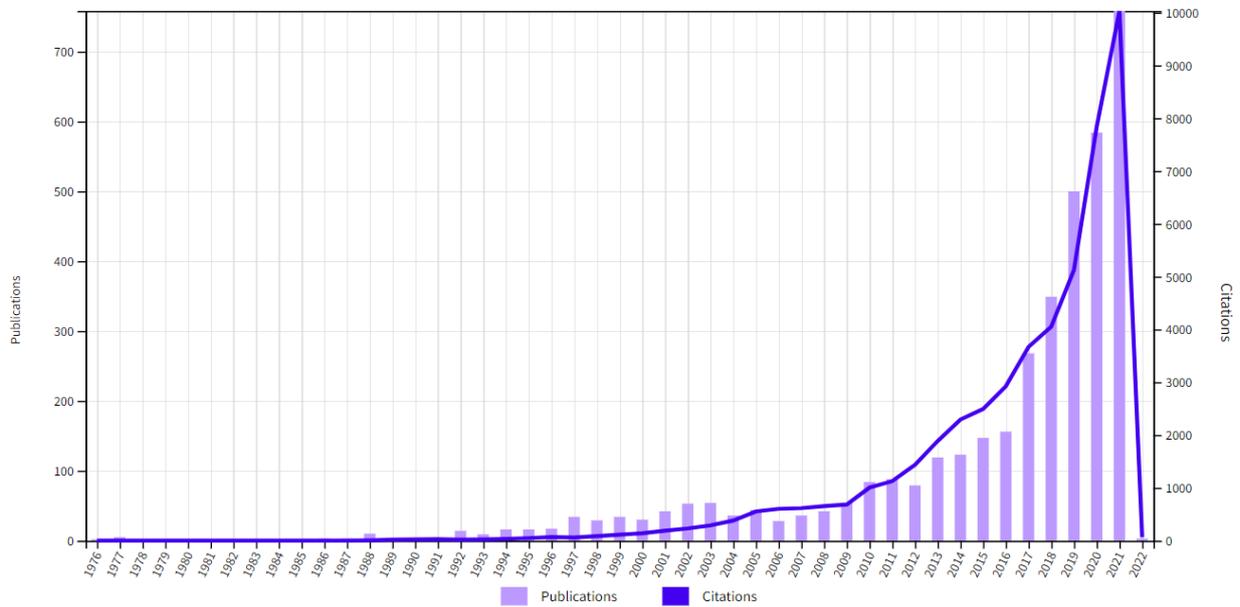
46,807

Without self-citations

12.49

Average per item

Times Cited and Publications Over Time



Citas y promedios de cita

Citas por documento, por año, en los últimos 5 años...

Índice H

Relaciona productividad e impacto. Un autor con índice h=4 nos dice que tiene 4 artículos con 4 citas cada uno.

WoS, Scopus y Google Scholar Citations ofrecen índice H.

Más información en nuestra [guía](#).

Impacto normalizado por área temática

Promedios mundiales de citas por año, categoría temática y tipo de documento. Sitúa los artículos por encima o debajo de la media, siempre normalizada en 1.

Top1%, Top10%, Highly Cited Papers, Category Normalized Citation Impact...

Factor de Impacto

Muestra la relevancia de una revista dentro de su área, en función del número de citas recibidas por sus artículos.

Con las citas recogidas en WoS se elabora el Journal Citation Report (JCR) y con las citas recogidas en Scopus, se elaboran dos indicadores de impacto, el Scimago Journal Ranking (SJR) y CiteScore, que nació en 2016.

Más información en nuestra [guía](#).

Altmétricas

Número de veces que un artículo es compartido, descargado o mencionado en los medios sociales, gestores de referencia y medios de comunicación.

Más información en nuestra [guía](#).

Colaboraciones

Se mide la colaboración internacional (coautores de instituciones fuera de España)

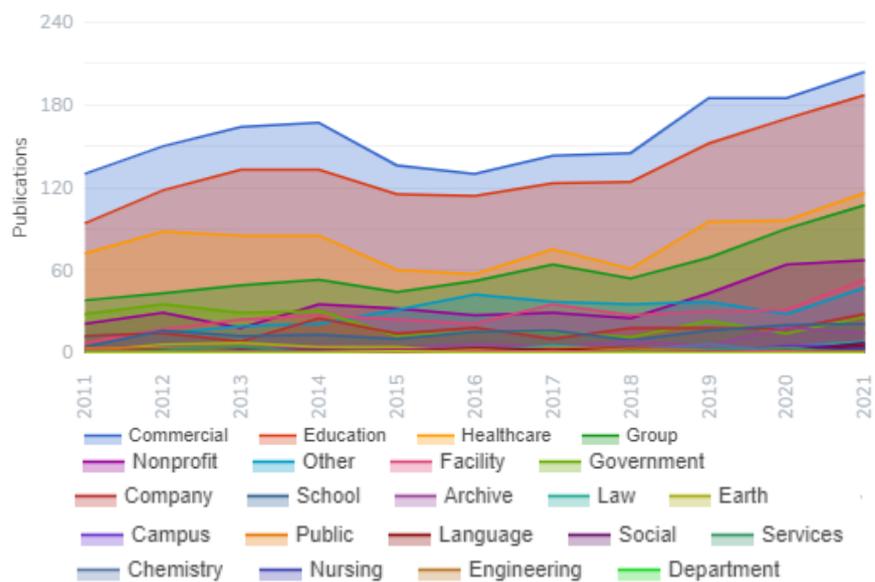
*Fuente: JCR, Journal Citation Reports: 2021

Colaboraciones Internacionales

7,313 Collaborators in 74 countries



Collaboration Volume by Collaborator Type



Fuente: wizdom.ai © 2021

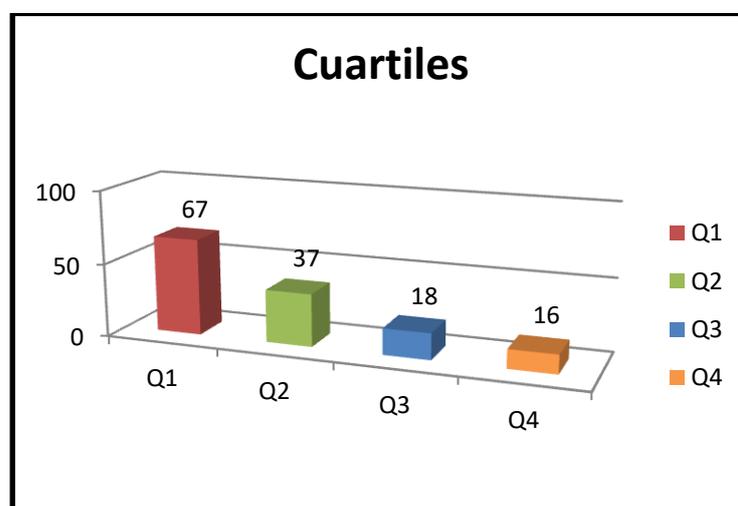
Publicaciones Científicas 2021



*Fuente: JCR, Journal Citation Reports: 2021

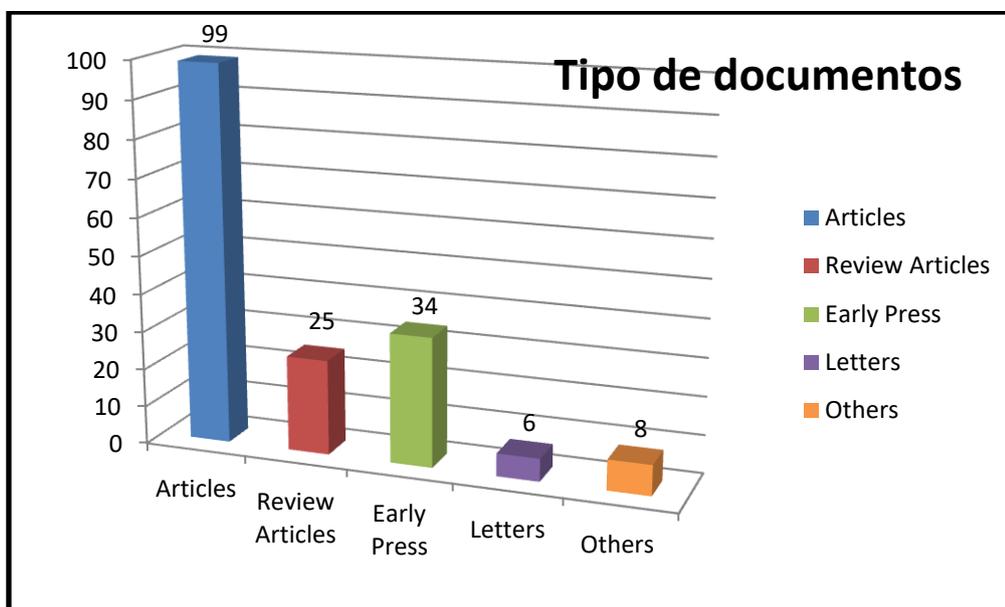
Cuartiles

Cuartiles: Herramienta estadística que sirve para administrar grupos de datos previamente ordenados. Son tres valores de la variable, que dividen un conjunto de datos ordenados según la categoría a la que pertenecen los artículos en la Web of Science en cuatro partes iguales según el % de los datos coincidiendo con la mediana (no todas las publicaciones tienen este dato).



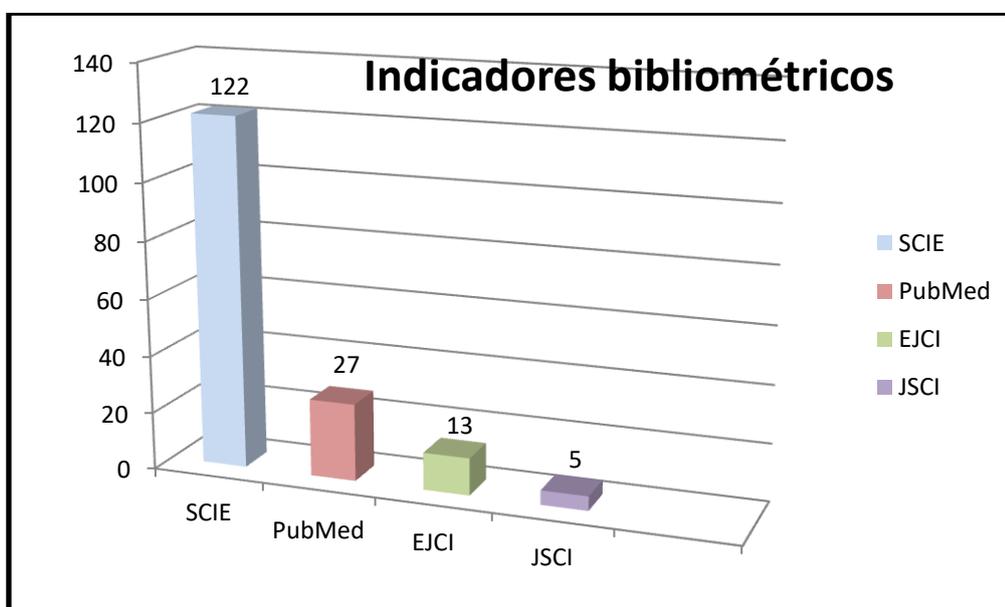
*Fuente: JCR, Journal Citation Reports: 2021

Tipo de documentos



*Fuente: JCR, Journal Citation Reports: 2021

Indicadores bibliométricos



*Fuente: JCR, Journal Citation Reports: 2021