

## Publication

## Assisted reproductive technology in Europe, 2011: results generated from European registers by ESHRE

**JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)**

ID 4378793

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**STUDY QUESTION:** The 15th European IVF-monitoring (EIM) report presents the results of treatments involving assisted reproductive technology (ART) initiated in Europe during 2011: are there any changes in the trends compared with previous years? **SUMMARY ANSWER:** Despite some fluctuations in the number of countries reporting data, while the overall number of ART cycles has continued to increase year by year, the pregnancy rates in 2011 decreased slightly to those reported in 2010, and the number of transfers with multiple embryos (3+) and the multiple delivery rates declined. **WHAT IS KNOWN ALREADY:** Since 1997, ART data in Europe have been collected and reported in 14 manuscripts, published in Human Reproduction. **STUDY DESIGN, SIZE, DURATION:** Retrospective data collection of European ART data by the EIM Consortium for the European Society of Human Reproduction and Embryology (ESHRE); cycles started between 1 January and 31 December 2011 are collected on a yearly basis. The data are collected by National Registers, when existing, or on a voluntary basis by personal information. **PARTICIPANTS/MATERIALS SETTING, METHODS:** From 33 countries (+2 compared with 2010), 1064 clinics reported 609 973 treatment cycles including: IVF 138 592, ICSI 298 918, frozen embryo replacement (FER) 129 693, egg donation (ED) 30 198, in vitro maturation 511, preimplantation genetic diagnosis/screening 6824 and frozen oocyte replacements 5237. European data on intrauterine insemination (IUI) using husband/partner's semen (IUI-H) and donor semen (IUI-D) were reported from 861 IUI laboratories in 24 countries. A total of 174 390 IUI-H and 41 151 IUI-D cycles were included. **MAIN RESULTS AND THE ROLE OF CHANCE:** In 17 countries where all clinics reported to

the ART register, a total of 361 972 ART cycles were performed in a population of 285 million inhabitants, corresponding to 1269 cycles per million inhabitants. For all IVF cycles, the clinical pregnancy rates per aspiration and per transfer were stable with 29.1 and 33.2%, respectively, and for ICSI, the corresponding rates also were stable with 27.9 and 31.8%, respectively. In FER cycles, the pregnancy rate per thawing increased to 21.3% if compared with previous years. In ED cycles, the pregnancy rate per fresh transfer decreased to 45.8% (47.4% in 2010) and increased to 33.6% (33.3% in 2010) per thawed transfer. The delivery rate after IUI-H decreased to 8.3 (8.9 in 2010), and to 12.2% (13.8% in 2010) after IUI-D. In IVF and ICSI cycles, 1, 2, 3 and 4+ embryos were transferred in 27.5, 56.7, 14.5 and 1.3% of cycles, respectively. The proportions of singleton, twin and triplet deliveries after IVF and ICSI (added together) were 80.8, 18.6 and 0.6%, respectively, resulting in a total multiple delivery rate of 19.2% compared with 20.6% in 2010, 20.2% in 2009, 21.7% in 2008, 22.3% in 2007 and 20.8% in 2006. In FER cycles, the multiple delivery rate was 13.2% (12.8% twins and 0.4% triplets). Twin and triplet delivery rates associated with IUI cycles were 9.7/0.6% and 7.3/0.3%, following IUI-H and IUI-D treatment, respectively. LIMITATIONS, REASONS FOR CAUTION: The method of reporting varies among countries, and registers from a number of countries have been unable to provide some of the relevant data such as initiated cycles and deliveries. As long as data are incomplete and generated through different methods of collection, results should be interpreted with caution. WIDER IMPLICATIONS OF THE FINDINGS: The 15th ESHRE report on ART shows a continuing expansion of the number of treatment cycles in Europe, with more than 600 000 cycles reported in 2011. Since 2006, the proportion of IVF to ICSI cycles has reached a plateau after a small decrease in 2009. Pregnancy and delivery rates after IVF remained relatively stable compared with 2010 and 2009. The pregnancy rate per aspiration in ICSI cycles declined for the first time by 0.9%. The multiple delivery rate is lower than ever before. STUDY FUNDING/COMPETING INTERESTS: The study had no external funding; all costs are covered by ESHRE. There are no competing interests.

**Publisher** OXFORD UNIV PRESS

**ISSN/ISBN** 1460-2350

**edoc-URL** <https://edoc.unibas.ch/61633/>

**Full Text on edoc** No;

**Digital Object Identifier DOI** 10.1093/humrep/dev319

**PubMed ID** <http://www.ncbi.nlm.nih.gov/pubmed/26740578>

**ISI-Number** WOS:000371149400002

**Document type (ISI)** Journal Article