

## INVITED SESSION

## SESSION 34: EUROPEAN AND GLOBAL ART MONITORING

29 June 2021

Stream 3

14:00 - 15:00

**O-042 Assisted Reproductive Technology (ART) in Europe 2018 and development of a strategy of vigilance. preliminary results generated from european registers by ESHRE****C. Wyns<sup>1</sup>, Ch. De Geyter<sup>2</sup>, C. Calhaz-Jorge<sup>3</sup>, MS. Kupka<sup>4</sup>, T. Motrenko<sup>5</sup>, J. Smeenk<sup>6</sup>, C. Bergh<sup>7</sup>, A. Tandler-Schneider<sup>8,1</sup>, A. Rugescu<sup>9</sup>, S. Vidakovic<sup>10</sup>, V. Goossens<sup>11</sup>**<sup>1</sup>Cliniques universitaires Saint-Luc, Université Catholique de Louvain, Brussels, Belgium.<sup>2</sup>Reproductive Medicine and Gynecological Endocrinology (RME), University Hospital, University of Basel, Switzerland.<sup>3</sup>Faculdade de Medicina da Universidade de Lisboa, Portugal.<sup>4</sup>Fertility Center - Gynaekologikum, Hamburg, Germany.<sup>5</sup>Human Reproduction Center Budva, Montenegro.<sup>6</sup>Elisabeth Twee Steden Ziekenhuis, Tilburg, the Netherlands.<sup>7</sup>Dept of Obstetrics and Gynecology, Inst of Clinical Sciences, Göteborg University, Göteborg, Sweden.<sup>8</sup>Fertility Center Berlin, Berlin, Germany.<sup>9</sup>National Transplant Agency, Romania.<sup>10</sup>Institute of Obstetrics and Gynecology, Clinical Center Serbia «GAK», Serbia.<sup>11</sup>ESHRE Central Office, Meerstraat 60, Grimbergen, Belgium.**Study question:** What are the reported data on cycles in ART, IUI and fertility preservation interventions in 2018 as compared to previous years, as well as the main trends over the years?**Summary answer:** AUTHOR: The 22th ESHRE report on ART and IUI shows a progressive increase in reported treatment cycle numbers in Europe, a small decrease in the number of transfers (IVF + ICSI) with more than one embryo with a trend to decreasing multiple delivery rates, higher pregnancy and delivery rates after FER compared to fresh IVF and ICSI cycles, and outcomes for IUI cycles similar to previous years.**What is known already:** Since 1997, ART aggregated data generated by national registries, clinics or professional societies have been collected, analysed by the European IVF-monitoring Consortium (EIM) and reported in 21 manuscripts published in Human Reproduction and Human Reproduction Open.**Study design, size, duration:** Yearly collection of European medically assisted reproduction (MAR) data by EIM for ESHRE. The data on treatments performed between January 1 and December 31 2018 in 34 European countries were provided by either National Registries or registries based on personal initiatives of medical associations and scientific organisations.**Participants/materials, setting, methods:** In all, 1004 clinics offering ART services in 34 countries reported a total of 827 545 treatment cycles, involving 132 332 with IVF, 342 589 with ICSI, 260 013 with frozen embryo replacement (FER), 44 854 with preimplantation genetic testing (PGT), 42 869 with egg donation (ED), 406 with IVM of oocytes and 4482 cycles with frozen oocyte replacement (FOR). European data on IUI using husband/partner's semen (IUI-H) and donor semen (IUI-D) were reported from 783 institutions offering IUI

in 24 and 20 countries, respectively. A total of 132 624 treatments with IUI-H and 43 140 treatments with IUI-D were included. A total of 12 609 fertility preservation (FP) interventions from 13 countries including oocyte, ovarian tissue, semen and testicular tissue banking in pre- and postpubertal patients were reported.

**Main results and the role of chance:** In total, 1004 IVF clinics participated (93.4% of registered clinics in the participating countries). Next to these also 783 IUI units reported their data. In the 34 reporting countries, after IVF the clinical pregnancy rates (PR) per aspiration and per transfer in 2018 were similar to those observed in 2017 (28.7% and 41.6% versus 29.4% and 39.0%, respectively). After ICSI the corresponding rates were also similar to those achieved in 2017 (26.3% and 40.9% versus 27.3% and 40.2%). After FER with own embryos the PR per thawing is still on the rise, from 30.2% in 2017 to 33.0% in 2018. After ED the PR per fresh embryo transfer was 49.8% (49.2% in 2017) and per FOR 39.6% (43.3% in 2017). In IVF and ICSI together, the trend towards the transfer of fewer embryos continues with the transfer of 1, 2, 3 and  $\geq 4$  embryos in 51.1%, 45.4%, 3.4% and 0.1% of all treatments, respectively (corresponding to 46.0%, 49.2%, 4.5% and 0.3% in 2017). This resulted in a proportion of singleton, twin and triplet DRs of 86.9%, 12.8% and 0.3%, respectively (compared to 85.5%, 14.2% and 0.3%, respectively in 2017). Treatments with FER in 2017 resulted in twin and triplet DR of 9.3% and 0.1%, respectively (versus 11.2% and 0.2% in 2017). After IUI, the DRs remained similar at 9.1% after IUI-H (8.9% in 2017) and at 12.3% after IUI-D (12.4% in 2017). Twin and triplet DRs after IUI-H were 8.4% and 0.3%, respectively (in 2017: 8.1% and 0.3%) and 6.7% and 0.2% after IUI-D (in 2017: 6.9% and 0.2%). The majority of FP interventions included the cryopreservation of ejaculated sperm ( $n=8\ 257$  from 13 countries) and of oocytes ( $n=3230$  from 13 countries).

**Limitations, reasons for caution:** As the methods of data collection and levels of completeness of reported data vary among European countries, the results should be interpreted with caution. For this abstract a number of countries was not able to provide adequate data about the number of centers and initiated cycles and deliveries.

**Wider implications of the findings:** The 22nd ESHRE report on ART and IUI shows a continuous increase of reported treatment numbers and MAR-derived livebirths in Europe. Being already the largest data collection on MAR in Europe, continuous efforts to stimulate data collection and reporting strive for future quality control and completeness of the data and offer higher transparency and vigilance in the field of reproductive medicine.

**Trial registration number:**

**Study funding:**

**Funding source:**