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Assisted reproductive technology in Europe, 2003. Results generated from European registers by ESHRE

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BACKGROUND: European results of assisted reproductive techniques (ARTs) from treatments initiated during 2003 are presented in this seventh report. METHODS: Data were mainly collected from already existing national registers. From 28 countries, 725 clinics reported 365 103 treatment cycles with: IVF 132 932, ICSI 162 149, frozen embryo replacement (FER) 60 412, oocyte donation (OD) 7548, PGD/PGS 1956 and IVM 109. Overall, this represents a 13% increase since 2002. For the third time, results on European data on intrauterine inseminations (IUIs) were reported from 19 countries. A total of 99 577 cycles (IUI-H, 82 834; IUI-D, 16 743) were included. RESULTS: In those 15 countries where all clinics reported to the register, a total of 284 765 cycles were performed in a population of 278.7 million, corresponding to 1022 cycles per million inhabitants. For IVF, the clinical pregnancy rates per aspiration and per transfer were 26.1 and 29.6%, respectively. For ICSI, the corresponding rates were 26.5 and 28.7%. After IUI-H, the clinical pregnancy rate was 12.2% in women below 40 years and 8.8% in women ≥ 40 years. After IVF and ICSI, the distribution of transfer of one, two, three and four or more embryos was 15.7, 55.9, 24.9 and 3.5%, respectively. Compared to the year 2002, fewer embryos were transferred, but huge differences still exist between countries. The distribution of singleton, twin and triplet deliveries for IVF and ICSI combined was 76.7, 22.0 and 1.1%, respectively. This gives a total multiple delivery rate of 23.1% compared with 24.5% in 2002. The range of triplet deliveries after IVF and ICSI varied from 0.0 to 4.4% between countries. After IUI-H in women below 40 years of age, 11.4% were twin and 2.2% triplet gestations.

Keywords: ESHRE; Europe; ICSI; IUI; IVF; register data

Introduction

This report is the seventh annual ESHRE publication on European data on assisted reproduction technology (ART). The six previous, also published in Human Reproduction (ESHRE, 2001a,b, 2002, 2004, 2005, 2006), covered treatment cycles during 1997–2002.

Data have been collected from 28 European countries and covers ART with IVF, ICSI, frozen embryo replacements (FERs), oocyte donations (ODs), *in vitro* maturation (IVM) and pooled data on preimplantation genetic diagnosis (PGD) and screening (PGS) during 2003. Additionally, for 2003 data on intrauterine inseminations with husband semen (IUI-H; 18 countries) and inseminations with donor semen (IUI-D; 16 countries) were included. According to the International Committee for Monitoring ART (ICMART)-WHO definitions (WHO, 2002) IUI-H and IUI-D should not be classified as ART. However, the European IVF Monitoring (EIM) Consortium has decided to continue to include the IUI activity in the annual reports. The reasons are that these treatments are frequently used, they give a contribution to the annual birth rates and include risks like multiple gestations and ethical concerns as when donor sperm is used.

A sixth meeting with the EIM Consortium was held at the ESHRE meeting in Prague in June 2006 with representatives from participating countries, where the present and future reporting systems were discussed. The Czech Republic and Cyprus were unable to provide data for 2003, but Austria and Serbia and Montenegro joined the consortium and provided data. Latvia and Lithuania provided data again. The consortium stressed that efforts should be made to have better coverage in the Balkan and Eastern European countries. To that end, an ESHRE-EIM workshop was held in Belgrade during September 2006.

The Consortium noted that the quality of data still differs between countries. It was noted that in some large southern European countries the proportion of clinics that provided data should be increased compared with the present status: Spain (35%), Greece (50%) and Italy (60%). However, both

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Table 1: ART in European countries in 2003

Country	IVF clinics in the country		Treatment cycles						
	Clinics	Clinics reporting	IVF	ICSI	FER	OD	IVM	PGD	All
Austria	23	23	1308	3533	46				4887
Belgium	18	18	3442	6836	4099	662		555	15 594
Bulgaria	14	8	514	300	47	17		2	880
Croatia	7	7	1275	832	600				2707
Denmark	21	21	5639	3653	1519	82			10 893
Finland	17	17	2669	1769	2552	419	92	32	7533
France	95	95	21 704	26 303	12 423	251			60 681
Germany	116	116	34 611	52 574	15 241				102 426
Greece	44	22	3207	5267	892	316	0	108	9790
Hungary	11	6	761	1854	206	23	0	6	2850
Iceland	1	1	146	139	85	17	0	0	387
Ireland	5	4	1078	618	359	3	0	0	2058
Italy	207	124	8283	14 234	3092			268	25 877
Latvia	3	3	94	15	38	0	0	0	147
Lithuania	3	1	41	28	13			0	82
Macedonia	1	1	210	173	0	0	0	0	383
Netherlands	13	13	9755	6014	1767	45	0	68	17 649
Norway	10	10	2805	1995	514	0	0	0	5314
Poland	17	14	487	2545	1071	60	0		4163
Portugal	19	17	1054	1658	364	15	0	17	3108
Russia	41	36	6564	2373	1110	704	17	51	10 819
Serbia and Montenegro	10	4	164	216					380
Slovenia	3	3	770	1354	506	13	0	0	2643
Spain	187	44	3072	8662	1972	2711	0	594	17 011
Sweden	15	15	4925	4389	2405	17			11 736
Switzerland	19	19	934	2234	2460	0			5628
Ukraine	14	9	1170	576	197	166	0	23	2132
UK	74	74	16 250	12 005	6834	2027		232	37 348
All	1008	725	132 932	162 149	60 412	7548	109	1956	365 103

For Belgium, France and Iceland "treatment cycles" for IVF and ICSI refer to aspirations. FER refers to thawings, but for Austria, Finland and The Netherlands it refers to transfers. For Belgium, mixed cycles containing both IVF and ICSI are not included. OD refers to cycles where oocytes were donated or to a cycle where donor oocytes resulted in embryo transfer in a recipient.

Greece and Italy are going to establish compulsory national data collection programmes in the coming years. In 2003, data collection systems, coverage, definitions and validation still differed between countries. However, since the ESHRE Consortium meeting in Madrid 2003, it was decided that in the coming years the EIM Consortium members should continue to adapt to the definitions listed by ICMART as originally published in the WHO report (WHO, 2002), and now in Human Reproduction (Zegers-Hochschild, 2006a) and Fertility and Sterility (Zegers-Hochschild, 2006b).

The Consortium decided to continue to present annual reports and to try to improve the quality of the reports.

Material and Methods

Data collection

The present report summarizes data from IVF treatments started during 2003. The data include treatments with IVF, ICSI, OD, FER, PGD/PGS, IVM and IUI-H and IUI-D performed from 1 January 2003 to 31 December 2003. Follow-up data on pregnancies and deliveries are cohort data. For IUI only pregnancies, and not deliveries, were recorded. The number of clinics reporting IUI data may differ from the number of clinics presenting data on the *in vitro* techniques.

As it is evident from the tables, registers from a number of countries have been unable to provide some of the data.

The reporting principle used for 2003 data is basically similar to the preceding year (ESHRE, 2001a,b, 2002, 2004, 2005, 2006).

As the data presented here are incomplete and generated through different methods using different definitions in different countries, interpretation of the data must be done with some caution.

Results

Number of treatment cycles

Table 1 shows the number of all treatment cycles recorded in each country, the number of clinics in the country and the number of clinics reporting to the register. The cycles are subdivided into the IVF, ICSI, FER, OD, IVM and PDG/PGS. In Belgium, France and Iceland, the number of aspirations was used, as the number of initiated cycles was not available. In relation to FER, the number of transfers rather than the number of thawings were used in Austria, Finland and the Netherlands. Totally, 725 clinics from 28 countries reported 365 103 cycles.

Table 2 shows data from those 15 countries where all clinics reported to the register. The number of cycles is related to the total population in the country and the number of infants born after ART is expressed in percentage of the total number of live-born in the country. Overall 284 765 cycles were undertaken in a population of 278.7 million, giving a mean of 1022 cycles per million. The proportion of infants born after ART in those 15 countries ranged from 0.2 to 3.9%.

Table 2: ART in those countries where all clinics reported to the national register in 2003

Country	Cycles	Population	Cycles/million	ART deliveries	ART infants	National births	ART infants (%)
Austria	4887	8 188 207	597			78 725	
Belgium	15 039	10 289 088	1462	1046	1153	111 434	1.0
Croatia	2707	4 422 248	612	450	559	39 409	1.4
Denmark	10 893	5 384 384	2008	2019	2488	63 832	3.9
Finland	7406	5 213 013	1421	1569	1796	56 630	3.2
France	60 681	62 041 798	978	9849	11 728	793 893	1.5
Germany	102 426	82 398 326	1243	15 027	18 569	717 541	2.6
Iceland	387	280 798	1378	111	141	7176	2.0
Macedonia	383	2 063 122	186	46	64	27 543	0.2
Netherlands	17 536	16 150 511	1086			201 862	
Norway	5314	4 546 123	1169	1126	1404	56 209	2.5
Slovenia	2643	1 935 677	1365	502	502	17 062	2.9
Sweden	11 719	8 878 085	1320	2482	2778	94 973	2.9
Switzerland	5628	7 318 638	769	885	1070	72 407	1.5
UK	37 116	59 554 000	623	8114	10 133	663 611	1.5
All	284 765	278 664 018	1022			3 002 307	

Data refer to IVF, ICSI, FER, and OD.

Size of the clinics

Table 3 shows the size distribution of the 725 reporting clinics. The size of a clinic (or unit) is based on all cycles performed per year.

The distribution of clinics according to the number of cycles varies considerably among the countries. Among the larger countries, it could be noted that in Italy 41% of the clinics did less than 100 cycles annually, whereas in Belgium, Germany and the Netherlands 33–69% of the clinics did more than 1000 cycles a year.

To what extent these variations may influence results cannot be estimated from the present report.

Age distribution

Table 4 shows the age distribution of those women treated with IVF or ICSI in various countries.

Table 3: Size of the IVF clinics reporting to the register in 2003

Country	IVF clinics in the country				Size of clinics (cycles per year)							
	All	Reporting	<100	%	100–199	%	200–499	%	500–1000	%	>1000	%
Austria[a]	23	23										
Belgium	18	18	0	0.0	2	11.1	2	11.1	8	44.4	6	33.3
Bulgaria	14	8	4	50.0	4	50.0	0	0.0	0	0.0	0	0.0
Croatia	7	7	3	42.8	0	0.0	2	28.6	2	28.6	0	0.0
Denmark	21	21	3	14.3	3	14.3	4	19.0	9	42.8	2	9.5
Finland	17	17	0	0.0	3	17.6	9	52.9	3	17.6	2	11.8
France	95	95	7	7.4	7	7.4	30	31.6	36	37.9	15	15.8
Germany	116	116	9	7.7	12	10.3	28	24.1	27	23.3	40	34.5
Greece	44	22	4	18.2	5	22.7	7	31.8	4	18.2	2	9.1
Hungary	11	6	0	0.0	0	0.0	5	83.3	0	0.0	1	16.7
Iceland	1	1	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0
Ireland	5	4	0	0.0	0	0.0	2	50.0	1	25.0	1	25.0
Italy	207	124	51	41.1	35	28.2	26	21.0	8	6.4	4	3.2
Latvia	3	3	1	33.3	2	66.7	0	0.0	0	0.0	0	0.0
Lithuania	3	1	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0
Macedonia	1	1	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0
Netherlands	13	13	0	0.0	0	0.0	1	7.7	3	23.1	9	69.2
Norway	10	10	1	10.0	0	0.0	5	50.0	4	40.0	0	0.0
Poland	17	14	4	28.6	5	35.7	4	28.6	1	7.1	0	0.0
Portugal	19	17	6	35.3	4	23.5	6	35.3	1	5.9	0	0.0
Russia	41	36	9	25.0	9	25.0	10	27.8	7	19.4	1	2.8
Serbia and Montenegro	10	4	2	50.0	2	50.0	0	0.0	0	0.0	0	0.0
Slovenia	3	3	0	0.0	0	0.0	1	33.3	1	33.3	1	33.3
Spain	187	44	12	26.1	12	26.1	12	26.1	5	10.9	3	6.5
Sweden	15	15	1	6.7	0	0.0	5	33.3	6	40.0	3	20.0
Switzerland	19	19	3	15.8	6	31.6	8	42.1	1	5.3	1	5.3
Ukraine	14	9	2	22.2	4	44.4	1	11.1	2	22.2	0	0.0
UK	74	74	7	9.5	9	12.2	30	40.5	18	24.4	10	13.5
All[a]	962	702	130	18.5	124	17.7	200	28.5	147	20.9	101	14.4

[a]Data from Austria are not included in the total.

Table 4: Age dsitribution (years) of women treated with IVF and ICSI in 2003

Country	IVF (%)					ICSI (%)				
	≤29	30–34	35–39	40–44	≥45	≤29	30–34	35–39	40–44	≥45
Austria										
Belgium	22.1	37.5	27.5	12.0	0.7	26.3	34.9	27.2	10.6	0.8
Bulgaria	21.2	42.0	25.9	10.3	0.6	26.3	37.0	27.0	9.3	0.3
Croatia	10.6	34.3	52.9	2.3	0.0	12.3	35.0	51.1	1.7	0.0
Denmark	19.1	35.6	34.2	10.1	1.0	25.1	35.5	30.8	8.0	0.6
Finland	24.5	33.6	32.1	13.4		25.8	33.4	30.8	9.9	
France	13.2	36.1	33.7	16.2	0.8	20.6	39.4	28.4	11.3	0.4
Germany	19.8	36.9	36.0	7.0	0.3	23.5	38.1	32.2	5.9	0.3
Greece	12.6	26.9	39.6	17.3	3.5	14.5	30.7	34.7	15.9	4.3
Hungary	23.0	38.2	26.9	10.5	1.3	28.7	36.5	26.4	7.4	0.9
Iceland	18.5	35.6	37.0	8.9	0.0	25.9	36.7	25.9	11.5	0.0
Ireland	6.9	24.8	48.9	18.8	0.7	12.6	33.7	42.5	10.8	0.4
Italy	11.9	31.4	38.9	15.6	2.2	13.1	30.8	37.2	16.0	2.9
Latvia	30.9	33.0	26.6	7.4	2.1	33.3	40.0	26.7	0.0	0.0
Lithuania	12.2	26.8	24.4	24.4	12.2	10.7	53.6	17.9	17.9	0.0
Macedonia	15.4	35.9	31.3	15.4	2.1	23.1	38.5	25.0	13.5	0.0
Netherlands										
Norway										
Poland	22.6	45.8	22.0	8.2	1.4	21.7	40.7	24.9	10.8	1.9
Portugal	13.5	42.7	36.6	6.9	0.2	21.0	40.2	29.0	9.2	0.6
Russia	27.5	36.3	24.2	10.2	1.8	28.0	33.1	23.7	11.4	3.5
Serbia and Montenegro	10.4	33.5	32.9	16.5	6.7	9.3	22.2	39.3	25.0	4.2
Slovenia[a]	12.8	41.2	33.9	14.4	0.3	20.4	33.7	29.2	16.3	0.1
Spain	7.0	37.5	45.7	9.1	0.7	11.1	40.8	38.4	9.1	0.7
Sweden	13.0	35.4	39.2	12.4	0.0	17.5	36.2	36.4	9.9	0.0
Switzerland	8.7	27.9	39.2	15.7	0.9	11.0	33.2	33.9	11.5	0.4
Ukraine	30.9	38.8	24.5	5.6	0.2	38.4	30.9	23.4	7.3	0.0
UK	11.2	33.5	40.6	13.8	0.9	15.0	36.8	37.5	10.2	0.5
All	16.8	35.2	34.2	12.1		20.6	36.1	31.2	10.8	

Austria, The Netherlands and Norway: no data available. For Switzerland, in 71 IVF cases the age was missing (7.6%) as well as in 222 ICSI cases (9.94%). For France, it was estimated from the Fivnat register. For Finland, data was missing in 18 IVF cycles and 4 ICSI cycles. Data for women aged 45 or more are included in the age group of 40–44 years. The age distribution of women receiving OD was known in 7076 cases (<29 years 5.3%, 30–34 years 16.7%, 35–39 years 28.7%, 40–44 years 32.2% and >45 years 17.2%).
[a]For Slovenia, data are inconsistent.

Number of embryos transferred

Table 5 shows the number of embryos transferred after IVF and ICSI combined. The total number of single embryo transfers (SET) was 36 655 (15.7%), dual embryo transfers 130 966 (55.9%), triple embryo transfers, 58 304 (24.9%) and four or more embryo transfers 8207 (3.5%). As indicated in the table, major differences were seen between countries. In 2003, several countries had a rise in SET. The highest levels were found in Belgium (43%), Finland (43%) and Sweden (55%). The proportion of triple embryo transfers ranged from 0.1% in Sweden to 60.7% in Lithuania. Transfer of four or more embryos ranged from 0.0% in several countries to 29.8% in Greece.

Elective SET (eSET) was reported in 7155 cycles from seven countries. The major contributors were Sweden (3272), France (2196) and Finland (1288). No separate data are available regarding the pregnancy rates after eSET.

Pregnancies and deliveries after treatment

Tables 6–9 show the number of pregnancies and deliveries in relation to the number of initiated cycles, aspirations and transfers, for IVF (Table 6), ICSI (Table 7), FER (Table 8) and OD (Table 9).

Table 6 shows that after IVF the 31 074 pregnancies resulted from 118 919 aspirations and 105 048 embryo transfers. Thus, the mean clinical pregnancy rate was 26.1% per aspiration and 29.6% per embryo transfer. The latter figure ranged from 20.8–44.4% by country. The delivery rates per embryo transfer after IVF have not been summarized due to incomplete or absence of follow-up of pregnancies in many countries (Table 10).

Table 7 shows that after ICSI the 40 605 pregnancies resulted from 153 134 aspirations and 141 690 transfers. Thus the mean clinical pregnancy rate was 26.5% per aspiration and 28.7% per embryo transfer. The latter figure ranged from 10.2 to 37.1% by country. The delivery rates per embryo transfer after ICSI have not been summarized due to incomplete or absence of follow-up of pregnancies in many countries (Table 10).

Table 8 shows that after FER 9931 pregnancies resulted from 53 354 transfers. Thus the mean clinical pregnancy rate per embryo transfer after FER was 18.6%. The latter figure ranged from 0 to 33.0% by country. The delivery rates per embryo transfer after FER have not been summarized due to incomplete or absence of follow-up of pregnancies in many countries (Table 11).

Table 9 shows that after OD 2700 clinical pregnancies resulted from 7117 embryo transfers, giving a pregnancy rate

Table 5: Number of embryos transferred after IVF and ICSI combined in 2003

Country	All transfers	1 embryo	%	2 embryos	%	3 embryos	%	4+ embryos	%
Austria	4370	493	11.3	2623	60.0	1123	25.7	131	3.0
Belgium	9577	4160	43.4	3999	41.8	1175	12.3	243	2.5
Bulgaria	740	63	8.5	169	22.8	388	52.4	120	16.2
Croatia	1883	165	8.8	1682	89.3	36	1.9	0	0.0
Denmark	7795	1675	21.5	5649	72.5	471	6.0	0	0.0
Finland	3951	1711	43.3	2195	55.6	45	1.1	0	0.0
France	41 573	6485	15.6	23 958	57.6	9907	23.8	1223	2.9
Germany	73 196	8044	11.0	44 344	60.6	20 808	28.4	0	0.0
Greece	7187	795	11.1	1580	22.0	2670	37.2	2142	29.8
Hungary	2345	231	9.9	430	18.3	1247	53.2	437	18.6
Iceland	262	28	10.7	188	71.8	46	17.6	0	0.0
Ireland	1660	99	6.0	1148	69.2	390	23.5	23	1.4
Italy	17 829	2425	13.6	6069	34.0	7842	44.0	1493	8.4
Latvia	102	23	22.5	49	48.0	30	29.4	0	0.0
Lithuania	61	1	1.6	11	18.0	37	60.7	12	19.7
Macedonia	263	74	28.1	74	28.1	82	31.2	33	12.5
Netherlands	12 743								
Norway	4241								
Poland	2712	362	13.3	1679	61.9	628	23.2	43	1.6
Portugal	2287	323	14.1	1240	54.2	655	28.6	69	3.0
Russia	7947	1050	13.2	3108	39.1	2626	33.0	1163	14.6
Serbia and Montenegro	274	48	17.5	76	27.7	107	39.0	43	15.7
Slovenia	1779	465	26.1	1169	65.7	145	8.2	0	0.0
Spain	9849	1129	11.5	4320	43.9	3642	37.0	758	7.7
Sweden	7898	4304	54.5	3584	45.4	10	0.1	0	0.0
Switzerland	2726	328	12.0	1766	64.8	631	23.1	1	0.0
Ukraine	1581	170	10.8	446	28.2	692	43.8	273	17.3
UK	24 295	2014	8.3	19 410	79.9	2871	11.8	0	0.0
All	234 142[a]	36 665	15.7	130 966	55.9	58 304	24.9	8207	3.5

Data restricted to those transfers where the number of embryos transferred is known.
[a]Total excludes transfers from The Netherlands and Norway as the number of embryos transferred is not known for these countries.

per transfer of 37.9%, with a range from 14.3 to 55.2%. The delivery rates per embryo transfer after OD have not been summarized due to incomplete or absence of follow-up of pregnancies in many countries.

Preimplantation genetic diagnosis/screening

PGD/PGS activity was recorded from 12 countries, as indicated in Table 1: totally it involved 1956 cycles, 1833 aspirations, 1382 embryo transfers, 447 pregnancies (32.3% per transfer) and 298 deliveries.

In vitro maturation

IVM was recorded in two countries. Finland (92 cycles) and Russia (17 cycles). The 109 cycles resulted in 10 (9.2%) pregnancies.

Singleton, twin, triplet and quadruplet deliveries

Table 10 shows the deliveries after IVF and ICSI in relation to singleton, twin and triplet deliveries. The distribution of the deliveries was: singleton 36 189 (76.7%), twin 10 396 (22.0%) and triplet 534 (1.1%). Quadruplets occurred in 41 cases in 2003.

Table 11 shows deliveries after FER in relation to singleton, twin and triplet deliveries. It is seen that the distribution of the deliveries was: singleton 5569 (84.4%), twin 956 (14.5%) and triplet 37 (0.6%).

Risks and fetal reductions

Table 12 presents the incidence of ovarian hyperstimulation syndrome (OHSS) recorded from registers in 24 of the 28 countries. It is seen that 2646 cases of OHSS were recorded. The number of IVF and ICSI cycles in those 24 countries were 255 875, corresponding to a risk of OHSS of 1.0% of all stimulated cycles. Other complications are seen in the table.

Table 12 also gives data on the number of recorded fetal reductions. In total, 480 fetal reductions were recorded.

Intrauterine inseminations

Table 13 gives data on IUI-H divided in female age groups <40 years (upper panel) and ≥ 40 years (lower panel). For France, no stratification for age was available, and the overall results are included in the group below 40 years of age.

In women below 40 years of age, 79 515 treatments resulted in 9702 pregnancies giving a pregnancy rate per procedure of 12.2%. In women at 40 years or above, the corresponding figures were 3319, 293 and 8.8%.

In women below 40, singleton, twin and triplet pregnancies accounted for 86.4, 11.4 and 2.2%, respectively, of the pregnancies. In women above 40, the corresponding figures were 93.8, 6.2 and 0%.

Table 14 gives data on IUI-D divided in female age groups <40 years (upper panel) and ≥ 40 years (lower panel). For France, no stratification for age was available, and the overall results are included in the group below 40 years of age.

Table 6: Pregnancies and deliveries after IVF in 2003

Country	Cycles	Aspirations	Transfers	Pregnancies	Deliveries	Pregnancies per cycle (%)	Pregnancies per aspiration (%)	Pregnancies per transfer (%)	Deliveries per cycle (%)	Deliveries per aspiration (%)	Deliveries per transfer (%)
Austria	1308										
Belgium		3442	3173	659	237		19.1	20.8		6.9	7.5
Bulgaria	514	488	461	108	60	21.0	22.1	23.4	11.7	12.3	13.0
Croatia	1275	1235	1138	275	215	21.6	22.3	24.2	16.9	17.4	18.9
Denmark	5639	5349	4678	1500	1092	26.6	28.0	32.1	19.4	20.4	23.3
Finland	2669	2592	2342	744	570	27.8	28.7	31.8	21.4	22.0	24.3
France		21 704	18 184	4786	3636		22.1	26.4		16.8	20.0
Germany	34 611	28 154	24 666	7115	4547	20.6	25.3	28.8	13.1	16.2	18.4
Greece	3207	3046	2752	868	567	27.1	28.5	31.5	17.7	18.6	20.6
Hungary	761	692	663	206	173	27.1	29.8	31.1	22.7	25.0	26.1
Iceland		146	133	59	42		40.4	44.4		28.8	31.6
Ireland	1078	1058	982	341	282	31.6	32.2	34.7	26.2	26.7	28.7
Italy	8283	7172	6309	1751	1056	21.1	24.4	27.8	12.7	14.7	16.7
Latvia	94	88	88	26	23	27.7	29.5	29.5	24.5	26.1	26.1
Lithuania	41	41	35	14	6	34.1	34.1	40.0	14.6	14.6	17.1
Macedonia	210	195	155	57	31	27.1	29.2	36.8	14.8	15.9	20.0
Netherlands	9755	8744	7626	2561		26.3	29.3	33.6			
Norway	2805	2683	2436	774	610	27.6	28.8	31.8	21.7	22.7	25.0
Poland	487	452	385	121	103	24.8	26.8	31.4	21.1	22.8	26.8
Portugal	1054	951	869	270	215	25.6	28.4	31.1	20.4	22.6	24.7
Russia	6564	6353	5806	1846	1006	28.1	29.1	31.8	15.3	15.8	17.3
Serbia and Montenegro	164	158	127	33	25	20.1	20.9	26.0	15.2	15.8	19.7
Slovenia	770	717	617	207	159	26.9	28.9	33.5	20.6	22.2	25.8
Spain	3072	2630	2475	862	470	28.1	32.8	34.8	15.3	17.9	19.0
Sweden	4925	4584	4138	1432	1113	29.1	31.2	34.6	22.6	24.3	26.9
Switzerland	934	828	737	224	149	24.0	27.1	30.4	16.0	18.0	20.2
Ukraine	1170	1129	1039	316	251	27.0	28.0	30.4	21.5	22.2	24.2
UK	16 250	14 288	13 034	3919	3443	24.1	27.4	30.1	21.2	24.1	26.4
All		118 919	105 048	31 074			26.1	29.6			

The recording of deliveries is incomplete, see Table 10. Data on initiated cycles are not available for Belgium, France and Iceland. Data on deliveries are not available for Austria and The Netherlands.

In women below 40 years of age, 15 039 treatments resulted in 2514 pregnancies given a pregnancy rate per insemination of 16.7%. In women at 40 years or above, the corresponding figures were 1704, 106 and 6.3%.

In women below 40, singleton, twin and triplet pregnancies accounted for 88.2, 10.6 and 1.2% of the pregnancies. In women above 40, the corresponding figures were 97.1%, 2.9% and 0%.

Comments

The present report is the seventh consecutive European report on ART data. Together these reports cover treatment cycles from 1997 to 2003. It can be argued that as long as data are incomplete, generated through different methods of data collection and still using partly different definitions, the data should not be summarized, as it occurs in this report. We would stress, however, that the purpose of this report is more to provide a review of data from the participating National Registers. The focus should thus be on each specific country rather than on summary data.

In 2003, the number of countries reporting to ESHRE's EIM Consortium increased to 28 countries, now covering the whole of Western Europe because Austria joined the Consortium this year. In Central, Eastern and South Eastern Europe, no data were available from a number of countries, like Bosnia, the Czech Republic, Romania and Slovakia. Excluding the Baltic coutries, only Russia and Ukraine provide data.

There has also been an increase in the number of countries (now 15) with complete coverage in their reporting system, defined in the way that all clinics in the country report. As Germany now fulfils this criteria, and as Germany reported more than 100 000 cycles, the majority of data from Europe in the present report originates from countries where the reporting is complete, at least representing all clinics. We still do not have a complete European set of data, as the present report only includes around 70% of all centres in the reporting countries. However, we believe that those clinics that do not report are likely to be smaller in size than those that do report.

The number of reported cycles also continues to grow. In 2003, the total number of cycles reported from 725 clinics reached 365 103, compared with 324 238 cycles from 631 clinics in 2002, an increase by 13%. Additionally the present report includes close to 100 000 IUI-H and IUI-D cycles. It should be noted that the increased number of cycles from Germany during 2003 may in part be explained by more restricted access to free-of-charge public health insurance covered ART from January 2004. It is believed that many couples therefore wanted to be treated during 2003.

During the 7-year period of EIM reporting, the number of cycles has increased from 203 893 in 1997 to the 365 103 in

Table 7: Pregnancies and deliveries after ICSI in 2003

Country	Cycles	Aspirations	Transfers	Pregnancies	Deliveries	Pregnancies per cycle (%)	Pregnancies per aspiration (%)	Pregnancies per transfer (%)	Deliveries per cycle (%)	Deliveries per aspiration (%)	Deliveries per transfer (%)
Austria	3533										
Belgium		6836	6404	1377	513		20.1	21.5		7.5	8.0
Bulgaria	300	293	279	87	71	29.3	30.0	31.5	23.7	24.2	25.4
Croatia	832	768	745	199	155	23.9	25.9	26.7	18.6	20.2	20.8
Denmark	3653	3563	3117	993	762	27.2	27.9	31.9	20.9	21.4	24.4
Finland	1769	1730	1609	493	386	27.9	28.5	30.6	21.8	22.3	24.0
France		26 303	23 431	6198	4818		23.6	26.5		18.3	20.6
Germany	52 574	51 410	48 530	13 673	9107	26.0	26.6	28.2	17.3	17.7	18.8
Greece	5267	5066	4435	1451	971	31.2	32.5	37.1	18.4	19.2	21.9
Hungary	1854	1776	1682	527	398	28.4	29.7	31.3	21.5	22.4	23.7
Iceland		139	129	47	41		33.8	36.4		29.5	31.8
Ireland	618	703	678	194	162	27.6	28.6	31.4	23.0	23.9	26.2
Italy	14 234	12 790	11 520	3163	1887	22.2	24.7	27.5	13.3	14.8	16.4
Latvia	15	14	14	5	5	33.3	35.7	35.7	33.3	35.7	35.7
Lithuania	28	28	26	6	2	21.4	20.7	23.1	7.1	6.9	7.7
Macedonia	173	156	108	20	15	6.4	7.1	10.2	8.7	9.6	13.9
Netherlands	6014	5503	5117	1791		29.8	32.5	35.0			
Norway	1995	1947	1805	558	443	28.0	28.7	30.9	22.2	22.8	24.5
Poland	2545	2491	2327	767	663	30.1	30.8	33.0	26.1	26.6	28.5
Portugal	1658	1530	1418	396	303	23.9	25.9	27.9	18.3	19.8	21.4
Russia	2373	2260	2141	628	274	26.5	27.8	29.3	11.5	12.1	12.8
Serbia and Montenegro	216	181	147	30	20	10.7	13.8	16.7	5.4	6.9	8.3
Slovenia	1354	1318	1162	353	292	26.1	26.8	30.4	21.6	22.2	25.1
Spain	8662	7501	7374	2227	1277	30.6	35.4	36.0	14.7	17.0	17.3
Sweden	4389	4185	3760	1215	979	27.7	29.0	32.3	22.3	23.4	26.0
Switzerland	2234	2140	1989	641	448	28.7	30.0	32.2	20.1	20.9	22.5
Ukraine	576	560	542	159	133	27.6	28.4	29.3	23.1	23.8	24.5
UK	12 005	11 968	11 261	3407	3048	28.4	28.5	30.3	25.4	25.5	27.1
All		153 134	141 690	40 605			26.5	28.7			

The recording of deliveries is incomplete, see Table 10. Data on initiated cycles are not available for Belgium, France and Iceland. Data on deliveries are not available for Austria and The Netherlands. Ireland reported more aspirations than cycles. For Ireland more aspirations than cycles were recorded because one centre was not able to report the number of cycles.

2003, equivalent to an overall increase by 79%. This marked increase during the period is partly due to a better coverage in the reporting systems but is also due to a true expansion of activities.

The analysis of initiated cycles is confronted with several difficulties. In some countries, the number of initiated cycles was not reported at all and, in most of the other countries, the calculated cancellation rate was far beneath 10%. In other countries, like Germany, the number of initiated cycles that did not reach oocyte recovery was as high as 18.6% after IVF. The criteria for cancellation may certainly vary from country to country, but another explanation may be that the cancellation rates are generally underestimated. In the German system, the quality assurance program only allows cycles to be recorded prospectively. A started cycle thus has to be reported a few days after the start of stimulation, and certainly before planned oocyte retrieval. This will give the true cancellation rates. There is thus a real need to improve the collection of cancelled cycles in order to be able to deliver proper information on the results of ART to the patients and to really compare the countries regarding this variable.

Within Europe, the largest contribution comes from Germany with some 102 000 treatment cycles followed by France with ~60 000 cycles and the UK with ~37 000 reported cycles. For comparison, the ASRM/SART registry reported close to 123 000 cycles from the USA in 2003 (Wright *et al.*, 2006).

In southern Europe, a number of countries still in 2003 had a low coverage with 44 out of 187 (Spain), 124 out of 207 (Italy) and 22 out of 44 (Greece) clinics reporting to the EIM. Both Italy and Greece are now in the process of establishing statutory National IVF Registers, which will allow a complete coverage. The situation in Spain remains uncertain.

The availability of services remained highest in Denmark with 2008 cycles per million inhabitants. It should be noted that in the largest Western European countries, the availability was also high in Germany (1243) and France (978) but somewhat lower in the UK (623). The proportion of ART children to all children born in 2003 was also high in the five Nordic countries (2.5–3.9%), Slovenia (2.9%) and Germany (2.6%). In Belgium, the figure is only 1.0%, but this seems to be due to gross under-reporting of deliveries in Belgium (Tables 6 and 7). In the UK and France, it was 1.5%.

The proportion of ICSI versus standard IVF procedures increased from 49% in 2001 to 52% in 2002 and to 55% in 2003, so ICSI is clearly being used increasingly.

The number of embryos transferred in IVF and ICSI cycles differed substantially between countries, also in this report, but there is a clear trend during the years of observation towards transfers with fewer embryos. The mean number of

Table 8: Pregnancies and deliveries after FER (IVF and ICSI combined) in 2003

Country	Thawings	Transfers	Pregnancies	Deliveries	Pregnancies per thawing (%)	Pregnancies per transfer (%)	Deliveries per thawing (%)	Deliveries per transfer (%)
Austria		46	10			21.7		
Belgium	4099	3015	488	169	11.9	16.2	4.1	5.6
Bulgaria	47	42	5		10.6	11.9		
Croatia	600	514	97	80	16.2	18.9	13.3	15.6
Denmark	1519	1260	209	145	13.8	16.6	9.5	11.5
Finland		2552	570	419		22.3		16.4
France	12 423	11 099	1805	1370	14.5	16.3	11.0	12.3
Germany	15 241	13 598	2227	1373	14.6	16.4	9.0	10.1
Greece	892	830	274	162	30.7	33.0	18.2	19.5
Hungary	206	201	26	15	12.6	12.9	7.3	7.5
Iceland	85	85	27	20	31.8	31.8	23.5	23.5
Ireland	359	319	85	64	23.7	26.6	17.8	20.1
Italy	3092	2882	567	361	18.3	19.7	11.7	12.5
Latvia	38	38	5	3	13.2	13.2	7.9	7.9
Lithuania	13	7	0	0	0.0	0.0	0.0	0.0
Macedonia	0	0	0	0				
Netherlands		1767	379			21.4		
Norway	514	406	86	73	16.7	21.2	14.2	18.0
Poland	1071	952	157	131	14.7	16.5	12.2	13.8
Portugal	364	340	71	41	19.5	20.9	11.3	12.1
Russia	1110	1013	231	95	20.8	22.8	8.6	9.4
Serbia and Montenegro	38	29	6		15.8	20.7		
Slovenia	506	416	61	48	12.1	14.7	9.5	11.5
Spain	1972	1584	370	252	18.8	23.4	12.8	15.9
Sweden	2405	1964	492	384	20.5	25.1	16.0	19.6
Switzerland	2460	2185	407	288	16.5	18.6	11.7	13.2
Ukraine	197	195	43	30	21.8	22.1	15.2	15.4
UK	6858	6015	1233	1078	18.0	20.5	15.7	17.9
All		53 354	9931			18.6		

The recording of deliveries is incomplete, see Table 11. Data on deliveries are not available for Austria, Bulgaria, Serbia and Montenegro and The Netherlands. Data on the number of thawings are not available for Austria, Finland and The Netherlands.

Table 9: Pregnancies and deliveries after oocyte donation in 2003

Country	Donation	Transfers	Pregnancies	Deliveries	Pregnancies per donation (%)	Pregnancies per transfer (%)	Deliveries per donation (%)	Deliveries per transfer (%)
Austria								
Belgium	662	489	105	32	15.9	20.4	4.8	6.5
Bulgaria	17	16	7	5	41.2	43.8	29.4	31.3
Croatia								
Denmark	82	72	23	20	28.0	31.9	24.4	27.8
Finland	419	810	218	165	52.0	26.9	39.4	20.4
France		251	36	26		14.3		10.4
Germany								
Greece	316	263	92	65	29.1	35.0	20.6	24.7
Hungary	23	19	4	3	17.4	21.1	13.0	15.8
Iceland	17	16	8	8	47.1	50.0	47.1	50.0
Ireland	3	2	1	1	33.3	50.0	33.3	50.0
Italy								
Latvia	0	0	0	0				
Lithuania								
Macedonia	0	0	0	0				
Netherlands	45	37	16		35.6	43.2		
Norway	0	0	0	0				
Poland	60	59	17	15	28.3	28.8	25.0	25.4
Portugal	15	13	7	4	46.7	53.8	26.7	30.8
Russia	704	640	230	101	32.7	35.7	14.3	15.8
Serbia and Montenegro								
Slovenia	13	17	4	3	30.8	23.5	23.1	17.6
Spain	2711	2374	1311	875	48.4	55.2	32.3	36.9
Sweden	17	19	7	6	41.2	36.8	35.3	31.6
Switzerland								
Ukraine	166	143	58	45	34.9	40.6	27.1	31.5
UK	2027	1877	556	497	27.4	29.5	24.5	26.5
All		7117	2700			37.9		

The recording of deliveries is incomplete. Sweden: more transfers than donations are reported, due to oocyte sharing.

Table 10: Singleton, twin, triplet and quadruplet deliveries after IVF and ICSI in 2003

Country	All deliveries	Clinical pregnancies	Documented pregnancy loss	Lost to follow-up	Singleton deliveries	%	Twin deliveries	%	Triplet deliveries	%
Austria		1361								
Belgium	750	2035	431	763	623	83.1	122	16.3	5	0.7
Bulgaria	131	195	47		103	78.6	24	18.3	4	3.1
Croatia	370	474	69	35	275	74.3	89	24.1	6	1.6
Denmark	1854	2493	431	208	1425	76.9	421	22.7	8	0.4
Finland	956	1237	276	5	827	86.5	128	13.4	1	0.1
France	8454	10984	2530	78	6589	78.8	1728	20.7	43	0.5
Germany	13 648	20 788	4693	2541	10 526	77.1	2935	21.5	187	1.4
Greece	1535	2319	337	444	1033	67.3	477	31.1	25	1.6
Hungary	571	733	148	12	377	66.0	169	29.6	25	4.4
Iceland	83	106	23	0	61	73.5	22	26.5	0	0.0
Ireland	444	535	91	0	343	77.3	97	21.8	4	0.9
Italy	2937	4914	894	1077	2278	77.6	568	19.3	91	3.1
Latvia	28	31	3	0	21	75.0	7	25.0	0	0.0
Lithuania	8	20	8	4	8	100.0	0	0.0	0	0.0
Macedonia	46	77	21		30	65.2	14	30.4	2	4.3
Netherlands										
Norway	1053	1332	279	0	787	74.7	264	25.1	2	0.2
Poland	766	888	95	27	578	75.5	182	23.8	6	0.8
Portugal	518	666	104	44	368	71.0	134	25.9	16	3.1
Russia	1279	2474	505	689	989	77.3	262	20.5	28	2.2
Serbia and Montenegro	44	63	13	14	36	81.8	7	15.9	1	2.3
Slovenia	451	560	124	8	324	71.8	127	28.2	0	0.0
Spain	1723	3089	558	534	1217	70.6	473	27.4	34	2.0
Sweden	2092	2647	540	0	1844	88.1	247	11.8	1	0.0
Switzerland	597	865	225	58	466	78.1	127	21.3	4	0.7
Ukraine	384	475	73	18	229	59.6	147	38.3	8	2.1
UK	6490	7326	729	106	4832	74.4	1625	25.0	33	0.5
All	47 212	67 326[a]	13 247	6665	36 189	76.7	10 396	22.0	534	1.1

A total of 41 quadruplet deliveries were recorded. These were not included in the table or in the total number of deliveries. Deliveries refer to those deliveries with documented number of infants. Data in relation to pregnancy loss, lost for follow-up, pregnancies and deliveries are not consistent for all countries. No data are available for The Netherlands. The number of all deliveries is not available for Austria.
[a]Total excludes clinical pregnancies from Austria as no further data are available.

SET increased from 12.0% in 2001 to 13.7% in 2002 and to 15.7% in 2003. The proportion of two embryo transfers increased from 51.7% in 2001 to 54.8% in 2002 and to 55.9% in 2003. The proportion of three embryo transfers decreased from 39.6% in 1999 to 33.3% in 2000, 30.8% in 2001 and 26.9% in 2002 and down to 24.9% in 2003. Four embryo transfers also decreased from 9.3% in 1999 to 6.9% in 2000, 5.5% in 2001 and 4.7% in 2002 and down to 3.5% in 2003. In conclusion, the reduction in the number of embryos transferred continued in 2003.

This report is unable to define the number of eSET versus SET, but the rise in the number of one embryo transfers is undoubtedly due to a rise in eSET. As seen in Table 5 there were seven countries that reported transfer of a single embryo in more than 20% of all cycles. The highest rates were in Belgium and Finland (43%) and Sweden (55%). Of these, eSET is preferred in the IVF legislation in Belgium and Sweden, whereas in Finland the progress has been made collegially by IVF units.

The consistent trend towards transfer of fewer embryos is also reflected in the overall occurrence of multiple deliveries after IVF and ICSI. In 2000, the average multiple delivery rate was 26.9%, declining to 25.5% in 2001, 24.5% in 2002 and 23.1% in 2003. During the 7-year period of EIM reporting, the most remarkable finding regarding multiples has been the reduction in triplet deliveries from 3.6% in 1997, to 2.3% in 1998, 2.3% in 1999, 1.9% in 2000, 1.5% in 2001, 1.3% in 2002 and 1.1% in 2003. Still, however, huge differences exist between countries in relation to triplet rates.

When analysing the range of multiple delivery rates in different countries, the number of fetal reductions should also be considered. A total of 480 procedures were reported, the largest numbers being from France (126), the UK (98), Greece (83) and Spain (59). Without this intervention, the proportion of triplet deliveries would certainly have been higher, considering that the number of reported reductions is almost as high as the number of recorded triplet deliveries ($n = 534$, Table 10).

Pregnancy rates for IVF, ICSI and FER were basically unchanged in 2003, compared to 2002. For IVF, the mean pregnancy rate per transfer was 29.6% compared to 29.5% in 2002. For ICSI, the mean pregnancy rate was 28.7% compared to 29.4% in 2002. For FER, it was 18.6% compared to 18.4% in 2002. The figures from Europe remain lower than in the USA where 42% of ART transfers resulted in a pregnancy (Wright *et al.*, 2006). However, the multiple birth rates in the USA were also considerably higher at 34% after fresh transfers.

Another relevant end-point of ART is the cumulative delivery rate per started 'fresh cycle' (Tiitinen *et al.*, 2004). The importance of this is evident looking at the data from Finland

Table 11: Singleton, twin, triplet and quadruplet deliveries after FER in 2003

Country	All deliveries	Clinical pregnancies	Documented pregnancy loss	Lost to follow-up	Singleton deliveries	%	Twin deliveries	%	Triplet deliveries	%
Austria										
Belgium	169	488	119	139	142	84.0	25	14.8	2	1.2
Bulgaria		6	2							
Croatia	80	97	11	5	72	90.0	8	10.0	0	0.0
Denmark	145	209	46	18	119	82.1	25	17.2	1	0.7
Finland	419	570	159	0	374	89.3	43	10.3	2	0.5
France	1370	1853	483	39	1146	86.1	179	13.4	6	0.5
Germany	1373	2227	663	191	1171	85.3	189	13.8	13	0.9
Greece	162	258	32	64	116	71.6	42	25.9	4	2.5
Hungary	15	19	4	0	15	100.0	0	0.0	0	0.0
Iceland	20	27	7	0	14	70.0	6	30.0	0	0.0
Ireland	64	85	21	0	54	84.4	10	15.6	0	0.0
Italy	361	567	116	90	310	85.9	50	13.9	1	0.3
Latvia	3	5	1	1	3	100.0	0	0.0	0	0.0
Lithuania	0	1	1	0	0		0		0	
Macedonia										
Netherlands										
Norway	73	86	14	0	63	86.3	10	13.7	0	0.0
Poland	131	157	22	4	98	74.8	33	25.2	0	0.0
Portugal	41	71	23	7	30	73.2	10	24.4	1	2.4
Russia	95	231	57	79	85	89.5	9	9.5	1	1.1
Serbia and Montenegro										
Slovenia	48	54	16	0	41	85.4	7	14.6	0	0.0
Spain	252	370	49	32	209	82.9	43	17.1	0	0.0
Sweden	384	492	105	0	338	88.0	46	12.0	0	0.0
Switzerland	288	407	132	21	238	82.6	50	17.4	0	0.0
Ukraine	30	43	9	4	26	86.7	4	13.3	0	0.0
UK	1078	1233	134	21	905	84.0	167	15.5	6	0.6
All	6601	9550[a]	2224[a]	715	5569	84.4	956	14.5	37	0.6

Deliveries refer to those deliveries with documented number of infants. Data in relation to pregnancy loss, lost for follow-up, pregnancies and deliveries are not consistent for all countries. No data are available for Austria, Macedonia, The Netherlands and Serbia and Montenegro. The number of all deliveries is not available for Bulgaria.

[a]Total excludes pregnancies and documented pregnancy losses from Bulgaria as no further data are available.

where 4438 started stimulation cycles resulted in 956 deliveries (21.5%). However, as Finland has a policy with extensive use of cryopreservation, 2552 FER cycles (57.5% of the fresh cycles) were also done and these resulted in a further 419 deliveries. Assuming that there is a steady state from year to year between fresh and FER cycles, the 4 438 fresh cycles resulted in $956 + 419 = 1375$ deliveries that gives a cumulative delivery rate of 31.0% per started stimulation cycle. The extensive use of eSET and cryopreservation thus gave a very favourably delivery rate per cycle, and an overall multiple delivery rate as low as 12.6%.

The comparison between pregnancy rate and delivery rate shows that the pregnancy loss rate (including induced abortions, spontaneous abortions and extrauterine pregnancies) still varies too much between the countries (Tables 6–8). This raises the question of major differences either in applying the WHO/ESHRE definitions for a clinical pregnancy or in reporting the pregnancy outcomes. Additionally 10% of all pregnancies are lost for follow-up. This shows the work has to be continued at the international level to be able to make appropriate comparisons between countries.

Altogether, 1956 cycles with PGD/PGS were reported, compared to 1563 in 2002. ESHRE has a specially focused and more comprehensive reporting on PGD by the sixth ESHRE PGD Consortium report, which included a total of 2984 cycles in 2003. The two reporting systems are different, as the PGD Consortium bases their reports on detailed data from individual clinics. A comparison indicates that the number of PGD cycles reported to the National Registers, only include around two-thirds of the total activity (Sermon *et al.*, 2006).

For the second year, the present seventh report include European data on treatments with IUI-H (82 828 cycles) and IUI-D (14 779 cycles). The coverage of IUI activities is probably much less comprehensive than for the *in vitro* techniques. In women below 40 years of age, the pregnancy rate was 12.2% for IUI-H and 16.7% for IUI-D. In women at 40 years or above, the corresponding figures were 8.8% and 6.2%.

After IUI-H in women below 40 years of age, twin pregnancies occurred in 11.4% and triplet pregnancies in 2.2%. The data suggest that the twinning rates are only half of what is found with the *in vitro* techniques, but that the triplet rates are now higher.

To summarize, the present seventh ESHRE report on ART for Europe in 2003 shows a continuing expansion of the register regarding participating clinics, countries and the number of treatment cycles reported. The pregnancy rates after IVF, ICSI and FER were basically unchanged, but less embryos were

Table 12: Complications and fetal reductions in 2003

Country	OHSS	All complications to oocyte retrieval	Bleeding	Infection	Maternal death	Fetal reduction
Austria						
Belgium	158	225	15	16	0	7
Bulgaria	56	8	3			4
Croatia	178	17	15	2		
Denmark						
Finland	42	22	5	10	0	0
France	291	125	30	95		130
Germany	499		582		0	4
Greece	73	0	5	0	0	83
Hungary	28	3	2	1	0	21
Iceland	5	1	0	1	0	0
Ireland	23	0	0	0	1	0
Italy	208	100	95	5	0	
Latvia	0	0	0	0	0	0
Lithuania	0	0	0	0	0	0
Macedonia	2	0	0	0	0	4
Netherlands						
Norway	40	0	0	0	0	0
Poland	50	10	10	0	1	0
Portugal	10	1	0	1	0	
Russia	291	18	18	0	0	39
Serbia and Montenegro	7	4	3	1	0	0
Slovenia	9	3	2	1	0	1
Spain	91	13	10	2	0	59
Sweden						2
Switzerland	31	0	1	0	0	9
Ukraine	29	0	0	0	0	19
UK	525	55	3	0		98
All	2646		799			

The incidence of OHSS recorded from registers in 24 of the 28 countries.

Table 13: Intrauterine insemination with husband semen (IUI-H) in 2003

Country	Cycles	Pregnancies	Pregnant (%)	Singleton	%	Twin	%	Triplet	%
Women <40 years									
Austria									
Belgium									
Bulgaria	325	33	10.2	32	97.0	1	3.0		0.0
Croatia	954	110	11.5	108	98.2	2	1.8	0	0.0
Denmark	6584	905	13.7	808	89.3	81	9.0	16	1.8
Finland									
France	47 663	5300	11.1						
Germany									
Greece	1659	262	15.8	211	80.5	48	18.3	3	1.1
Hungary	1030	145	14.1	125	86.2	18	12.4	2	1.4
Iceland	316	49	15.5						
Ireland	434	39	9.0	34	94.4	2	5.6	0	0.0
Italy	8702	1130	13.0	960	85.6	123	11.0	38	3.4
Latvia	31	4	12.9	3	75.0	1	25.0	0	0.0
Lithuania	131	11	8.4	10	90.9	1	9.1	0	0.0
Macedonia	383	31	8.1	22	71.0	8	25.8	1	3.2
Netherlands									
Norway									
Poland	1917	283	14.8	237	83.7	42	14.8	4	1.4
Portugal	954	122	12.8	85	87.6	10	10.3	2	2.1
Russia									
Serbia and Montenegro	267	46	17.2						
Slovenia	448	28	6.3	25	89.3	3	10.7	0	0.0
Spain	6716	961	14.3	803	84.3	126	13.2	23	2.4
Sweden									
Switzerland									
Ukraine	1001	243	24.3	146	92.4	9	5.7	3	1.9
UK									
All	79 515	9702	12.2	3609	86.4	475	11.4	92	2.2

Continued

Table 13: *Continued*

Country	Cycles	Pregnancies	Pregnant (%)	Singleton	%	Twin	%	Triplet	%
Women > 40 years									
Austria									
Belgium									
Bulgaria	19	2	10.5	2	100.0	0	0.0	0	0.0
Croatia	156	14	9.0	14	100.0	0	0.0	0	0.0
Denmark	339	21	6.2	20	95.2	1	4.8	0	0.0
Finland									
France									
Germany									
Greece	166	20	12.0	19	95.0	1	5.0	0	0.0
Hungary	109	9	8.3	9	100.0	0	0.0	0	0.0
Iceland									
Ireland	70	4	5.7	4	100.0	0	0.0	0	0.0
Italy	1919	181	9.4	167	92.8	13	7.2	0	0.0
Latvia	6	0	0.0	0		0		0	
Lithuania	0	0		0		0		0	
Macedonia	40	0	0.0	0		0		0	
Netherlands									
Norway									
Poland	152	12	7.9	10	83.3	2	16.7	0	0.0
Portugal	54	9	16.7	6	100.0	0	0.0	0	0.0
Russia									
Serbia and Montenegro	37	4	10.8	4	100.0	0	0.0	0	0.0
Slovenia	3	0	0.0	0		0		0	
Spain	225	15	6.7	14	93.3	1	6.7	0	0.0
Sweden									
Switzerland									
Ukraine	24	2	8.3	2	100.0	0	0.0	0	0.0
UK									
All	3319	293	8.8	271	93.8	18	6.2	0	0.0

Distribution of singleton, twin and triplet gestations is unknown in a proportion of pregnancies. For France, all treatments are classified as being in women <40 years, because of lack of age stratification. Distribution of singleton versus multiple gestations is based on deliveries.

Table 14: Intrauterine insemination with donor semen (IUI-D) in 2003

Country	Cycles	Pregnancies	Pregnant (%)	Singleton	%	Twin	%	Triplet	%
Women <40years									
Austria									
Belgium									
Bulgaria	168	23	13.7	22	95.7	1	4.3	0	0.0
Croatia	68	9	13.2	9	100.0	0	0.0	0	0.0
Denmark	2433	422	17.3	365	86.5	52	12.3	5	1.2
Finland									
France	3588	502	14.0	459	86.3	69	13.0	4	0.8
Germany									
Greece	389	93	23.9	66	71.0	27	29.0	0	0.0
Hungary	121	23	19.0	19	86.4	3	13.6	0	0.0
Iceland	44	15	34.1						
Ireland	114	26	22.8	20	95.2	1	4.8	0	0.0
Italy									
Latvia	43	4	9.3	4	100.0	0	0.0	0	0.0
Lithuania	0	0		0		0		0	
Macedonia	0	0		0		0		0	
Netherlands									
Norway									
Poland	369	71	19.2	59	83.1	10	14.1	2	2.8
Portugal	201	49	24.4	34	87.2	4	10.3	1	2.6
Russia									
Serbia and Montenegro									
Slovenia	17	1	5.9	1	100.0	0	0.0	0	0.0
Spain	2017	419	20.8	354	84.9	51	12.2	12	2.9
Sweden	485	95	19.6	67	97.1	2	2.9	0	0.0
Switzerland									
Ukraine	442	99	22.4	96	97.0	3	3.0	0	0.0
UK	4540	663	14.6	608	93.3	39	6.0	5	0.8
All	15039	2514	16.7	2183	88.2	262	10.6	29	1.2

Continued

Table 14: *Continued*

Country	Cycles	Pregnancies	Pregnant (%)	Singleton	%	Twin	%	Triplet	%
Women ≥40 years									
Austria									
Belgium									
Bulgaria	20								
Croatia	31	4	12.9	4	100.0	0	0.0	0	0.0
Denmark	449	21	4.7	20	95.2	1	4.8	0	0.0
Finland									
France									
Germany									
Greece	70	12	17.1	12	100.0	0	0.0	0	0.0
Hungary	4	0	0.0	0		0		0	
Iceland									
Ireland	26	3	11.5	3	100.0	0	0.0	0	0.0
Italy									
Latvia	9	1	11.1	1	100.0	0	0.0	0	0.0
Lithuania	0	0		0		0		0	
Macedonia	0	0		0		0		0	
Netherlands									
Norway									
Poland	15	3	20.0	3	100.0	0	0.0	0	0.0
Portugal	1	0	0.0	0		0		0	
Russia									
Serbia and Montenegro									
Slovenia	0	0		0		0		0	
Spain	157	14	8.9	13	92.9	1	7.1	0	0.0
Sweden	39	0	0.0	0		0		0	
Switzerland									
Ukraine	7	1	14.3	1	100.0	0	0.0	0	0.0
UK	876	47	5.4	43	97.7	1	2.3	0	0.0
All	1704	106	6.3	100	97.1	3	2.9	0	0.0

For France all treatments are classified as being in women <40 years, because of lack of age stratification. Moreover, there was an inconsistency between the number of pregnancies and deliveries.

transferred and the multiple delivery rates continue to decline and accounted for 23% of all deliveries in 2003. Elective SET had a considerable impact in Belgium, Finland and Sweden and several other countries transferred a single embryo in more that 20% of cycles. This transfer policy is now documented, on a national basis, to have the expected effect on multiple delivery rates after transfer of fresh embryos. The figures were as low as 11.8% in Sweden, 13.5% in Finland and 17.0% in Belgium. Twin gestations seem to be much less frequent after IUI-H and IUI-D compared with IVF and ICSI, but triplets are now more frequent.

Supplementary data

Supplementary data are available at http://humrep.oxfordjournals.org

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