

# Assisted reproductive technology in Europe, 1999. Results generated from European registers by ESHRE

The European IVF-monitoring programme (EIM)\*, for the European Society of Human Reproduction and Embryology (ESHRE)<sup>1</sup>

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European results of assisted reproductive techniques from treatments initiated during 1999, are presented in this third report. Data were collected mainly from pre-existing national registers. From 22 countries 538 clinics reported 258 460 cycles: IVF 125 370, ICSI 95 221, frozen embryo replacement (FER) 34 002 and oocyte donations (OD) 3867. In eight countries, where all clinics reported to the register, a total of 99 629 cycles was performed in a population of nearly 106 million, corresponding to 943 cycles per million inhabitants and 3.9 cycles per 1000 women aged 15–49 years. After IVF and ICSI the distribution of transfer of 1, 2, 3 and  $\geq 4$  or more embryos was 11.9, 39.2, 39.6 and 9.3% respectively. Huge differences existed between countries. For IVF the clinical pregnancy rate per aspiration and per transfer was 24.2 and 27.7% respectively. For ICSI the corresponding rates were 26.1 and 27.9%. These figures represent relative increases by 2.2 to 5.2% compared with 1998. The distribution of singleton, twin, triplet and quadruplet deliveries for IVF and ICSI combined was 73.7, 24.0, 2.2 and 0.1%. This gives a total multiple delivery rate of 26.3%. Triplet deliveries after IVF and ICSI ranged from 0.3–7.0% between countries. Compared with 1998, the number of reported cycles increased by 11% and the clinical pregnancy rate per transfer increased from 27.0 to 27.7% after IVF and from 26.8 to 27.9% after ICSI. Multiple deliveries after IVF and ICSI remained unchanged at 26.3% in 1999.

*Key words:* ESHRE/Europe/ICSI/IVF/register data

## Introduction

This report is the third annual ESHRE publication on European data on assisted reproduction technology (ART). The two previous reports, also published in Human Reproduction (ESHRE, 2001a, ESHRE, 2001b), covered treatment cycles during 1997 and 1998.

Data has been collected from 22 European countries and covers IVF, ICSI, frozen embryo replacements (FER) and oocyte donations (OD) initiated during 1999. Data from each participating country is sent to ESHRE yearly. A draft report is made and scrutinized by all consortium members, listed in the Appendix at the end of this paper.

A second Consortium meeting was held at the ESHRE meeting in Vienna in July 2002 with representatives from participating countries, where the present and future reporting system was discussed. Here it was noted that Germany reported a marked increase in the coverage in their register. Belgium, Hungary and Switzerland were planning to advance

their registration systems from voluntary, non-governmental registers to mandatory registers run by the authorities. Additionally, it was noted that this year Ireland, Poland, Slovenia and Ukraine have joined the European IVF monitoring programme (EIM). Austria will be able to provide data for the year 2000.

The consortium noted that the quality of data still differs between countries. Data collection systems, coverage, definitions and validation are different. Definitions, as suggested by The International Committee on the Monitoring of ART (ICMART) will soon be published in a World Health Organization (WHO) IVF report. These definitions will be considered for adoption by the consortium.

The Consortium again noted that the data quality needs to be improved in the future. European countries still have different data collection systems with a variable degree of coverage, loss of follow-up and different definitions. The Consortium decided to continue to present annual reports and to try to improve the quality of the reports.

## Materials and methods

### National registers

A total of 16 countries had pre-existing data collection programmes for 1999, and therefore provided data directly from these sources. In

\*EIM subcommittee: Chairman, K.G.Nygren; co-ordinator, A.Nyboe Andersen; member, L.Gianaroli. See Appendix for contributing centres and contact persons representing the data collection programmes in the participating European countries.

Greece, Ireland, Italy, Poland, Slovenia and Ukraine where no such register existed, national data was collected *de novo* for the purpose of the EIM programme. Details regarding the registers have been described earlier (ESHRE, 2001a).

### Data collection

The present report summarizes data from ART treatments started during 1999. The data include treatments from IVF, ICSI, OD and FER performed from January 1, 1999 to December 31, 1999. Follow-up data on pregnancies and deliveries are cohort data.

The data collection programmes vary considerably from one country to another. Registers from a number of countries have been unable to provide some of the data. Lack of such specific variables will appear in the tables as 'not available' (NA).

The reporting principle used for the 1999 data is basically similar to the preceding year (ESHRE, 2001a,b). The following eight countries reported data from all clinics in the country: Denmark, Finland, France, Iceland, The Netherlands, Norway, Sweden and Switzerland. In 1998 the UK also reported data from all clinics. In 1999 technical problems within the Human Fertilisation and Embryology Authority (HFEA) had the consequence that only data from a proportion of the clinics were incorporated, and some data were not available.

For 1999, the report includes summary data on complications such as ovarian hyperstimulation syndrome (OHSS), infection and bleeding. Furthermore, data on preimplantation genetic diagnosis (PGD) are also available.

In most countries reports of pregnancies are based on the presence of one or more intrauterine gestational sacs at sonography ~5 weeks after embryo transfer. In some countries such as Denmark and The Netherlands, only pregnancies with a living fetus are recorded.

Deliveries were normally reported within the same reporting system as for treatments and pregnancies. For the present report neither the definitions of pregnancies or births have been standardized.

As the data presented here is 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 I shows the number of all treatment cycles recorded in each country, the number of clinics in the country (if available) and the number and size of clinics reporting to the register. The cycles are subdivided into IVF, ICSI, FER and OD. In Belgium, Iceland and Slovenia the number of aspirations were used, as the number of initiated cycles were not available. In total 538 clinics from 22 countries reported 258 460 cycles.

Table II shows data from those eight countries where all clinics reported to the register: Denmark, Finland, France, Iceland, The Netherlands, Norway, Sweden and Switzerland. The number of cycles are related to the total population in the country and to the female populations aged 15–49 years. In addition, the number of infants born after ART is expressed as a percentage of the total number of live-born in the country. Overall 99 629 cycles were undertaken in a population of 105.7 million, giving a mean of 943 cycles per million and 3.9 cycles per 1000 women aged 15–49. The percentage of infants born after ART was 1.6% on average and ranged

**Table I.** ART in European countries in 1999. Number of clinics in the country, number of clinics reporting to the national register and number of initiated<sup>a</sup> cycles of IVF, ICSI, frozen embryo replacements (FER) and oocyte donations (OD) in 1999

Country	Clinics	Clinics reporting	IVF	ICSI	FER	OD	All cycles
Belgium <sup>a</sup>	24	23	3014	5173	1906	418	10 511
Czech Republic	17	16	4450	2543	1527	198	8718
Denmark	17	17	4941	2683	1019	150	8793
Finland	18	18	2752	1825	2341	402	7320
France	95	95	22 616	20 203	8887	162	51 868
Germany <sup>b</sup>	NA	98	27 690	23 882	9151	0	60 723
Greece	46	14	3057	3158	199	362	6776
Hungary	8	6	1030	968	16	10	2024
Iceland <sup>a</sup>	1	1	189	151	64	11	415
Ireland	5	3	689	472	177	0	1338
Italy	NA	62	6110	6898	1813	495	15 316
Netherlands	13	13	9371	3850	1157	NA	14 378
Norway	8	8	2496	1240	293	0	4029
Poland	10	3	624	1411	403	0	2438
Portugal	13	8	735	886	139	0	1760
Russia	27	19	3356	953	207	273	4789
Slovenia <sup>a</sup>	3	3	825	608	260	0	1693
Spain	NA	39	3234	5155	1954	1273	11 616
Sweden	15	15	3750	3757	1153	0	8660
Switzerland <sup>b</sup>	18	18	935	1900	1331	0	4166
UK <sup>c</sup>	80	55	22 865	7350	NA	NA	30 215
Ukraine	8	4	641	155	5	113	914
All		537	125 370	95 221	34 002	3867	258 460

<sup>a</sup>Belgium, Iceland and Slovenia: aspirations rather than initiated cycles.

<sup>b</sup>Germany and Switzerland: FER refers to 2PN cryopreservation.

<sup>c</sup>UK: incomplete reporting in 1999, due to technical problems within the HFEA.

NA = not available.

from 0.7–3.6%. If Switzerland, where there is a large loss of follow-up of pregnancies, is excluded, the percentage of children born after ART was 1.7%, with a range from 1.4–3.6%.

### Size of the clinics

Table III shows the size distribution of the 538 reporting clinics. The size of a clinic (or unit) is based on all cycles performed per year.

### Age distribution

Table IV shows the age distribution of the treated women in various countries. In the different countries the age range of women <29 years was 6–45%; 30–34 years 31–44%; 35–39 years 18–44% and ≥40 years 4–18%.

### Number of embryos transferred

Table V shows the number of embryos transferred after IVF and ICSI combined. The total number of single embryo transfers was 15 881 (11.9%), dual embryo transfers 52 113 (39.2%), triple embryo transfers 52 646 (39.6%) and ≥4 embryo transfers 12 395 (9.3%). As indicated in the Table, wide differences were seen between countries. The range of triple embryo transfers was 4.5–67.3% and the range of transfer of ≥4 embryos was 0.0–59.5%.

### Pregnancies and deliveries after treatment

Tables VI–IX show the number of pregnancies and deliveries in relation to the number of initiated cycles, aspirations and

**Table II.** Art in 1999 in those European countries where all clinics have reported to a national register. Number of reported cycles, deliveries and infants in relation to the population and the national number of live born. Cycles include IVF, ICSI, FER and OD.

Country	Cycles (n)	Population ×10 <sup>6</sup>	Cycles/×10 <sup>6</sup>	Cycles/×10 <sup>6</sup> , <sup>a</sup> (15–49 year old women)	ART deliveries	ART infants	National births (n)	ART infants % of all
Denmark	8793	5.3	1659	7.3	1716	2119	66 232	3.2
Finland	7320	5.2	1407	6.0	1276	1553	57 574	2.7
France	51 868	58.8	882	3.6	8125	10 167	744 791	1.4
Iceland	415	0.3	1383	5.9	125	149	4100	3.6
Netherlands	14 378	15.7	915	3.6	NA	NA		
Norway	4029	4.4	915	3.8	839	1058	59 298	1.8
Sweden	8660	8.9	973	4.6	1849	2293	88 173	2.6
Switzerland <sup>b</sup>	4166	7.1	586	2.6	432	548	78 408	0.7
All	99 629	105.7	943	3.9	14 362	17 887	1 097 785	1.6

<sup>a</sup>Cycles are per 1000 women aged 15–49 years.

<sup>b</sup>Switzerland. Major loss of follow-up of pregnancies. ART deliveries therefore underestimated.

NA = not available.

**Table III.** Size of IVF clinics reporting to the register

Country	Clinics (n)	Size of clinics in % of all ART cycles for 1999				
		<100	100–199	200–499	500–999	>1.000
Belgium	23	NA	NA	NA	NA	NA
Czech Republic	16	19	0	50	19	13
Denmark	17	12	0	35	47	6
Finland	18	17	17	44	11	11
France	95	7	17	38	27	11
Germany	98	9	9	40	18	23
Greece	14	21	14	50	7	7
Hungary	6	0	0	83	17	0
Iceland	1	0	0	100	0	0
Ireland	3	33	0	0	66	0
Italy	62	31	26	34	8	2
Netherlands	13	0	8	0	46	46
Norway	8	13	0	50	38	0
Poland	3	0	0	33	33	33
Portugal	8	25	13	50	13	0
Russia	19	42	21	21	11	5
Slovenia	3	0	0	33	33	33
Spain	39	NA	NA	NA	NA	NA
Sweden	15	7	13	20	47	13
Switzerland	18	28	28	33	11	0
UK	55	35	20	24	18	4
Ukraine	4	25	25	50	0	0
All (range)	538	0–42	0–28	0–100	0–47	0–46

NA = not available.

transfers for IVF (Table VI), ICSI (Table VII), FER (Table VIII) and OD (Table IX).

Table VI shows that after IVF the 27 196 pregnancies resulted from 98 313 embryo transfers. Thus, the mean clinical pregnancy rate per embryo transfer was 27.7%, with a range

**Table IV.** Percentage age distribution of women treated with IVF and ICSI

Country	<29 years	30–34 years	35–39 years	>40 years
Belgium	NA	NA	NA	NA
Czech Republic	45	33	18	4
Denmark	NA	NA	NA	NA
Finland	21	35	31	13
France	20	37	31	12
Germany	19	40	31	10
Greece	11	31	41	18
Hungary	36	37	2	25
Iceland	NA	NA	NA	NA
Ireland	6	36	44	15
Italy	13	35	37	15
Netherlands	NA	NA	NA	NA
Norway	NA	NA	NA	NA
Poland	27	39	24	10
Portugal	18	44	31	8
Russia	33	32	26	10
Slovenia	20	32	33	15
Spain	12	40	36	12
Sweden	14	37	34	15
Switzerland	10	32	40	18
UK	NA	NA	NA	NA
Ukraine	38	31	26	5
All, range	6–45	31–44	18–44	4–18

NA = not available.

from 22.7–42.3%. The delivery rates per embryo transfer after IVF have not been summarized due to incomplete follow-up of pregnancies in many countries, as shown in Table VI.

Table VII shows that after ICSI the 21 916 pregnancies resulted from 78 452 embryo transfers. Thus the mean clinical pregnancy rate per embryo transfer was 27.9%, with a range from 18.5–35.2%. The delivery rates per embryo transfer after ICSI have not been summarized due to incomplete follow-up of pregnancies in many countries, as shown in Table VII.

Table VIII shows that after FER, 4950 pregnancies resulted from 31 482 transfers. Thus the mean clinical pregnancy rate per embryo transfer after FER was 15.7%. The delivery rates per embryo transfer after FER have not been summarized due to incomplete follow-up of pregnancies in many countries.

Table IX shows that after OD 1077 clinical pregnancies resulted from 2802 transfers, giving a pregnancy rate per transfer of 40.0%.

### Singleton, twin, triplet and quadruplet deliveries

Table X shows the deliveries after IVF and ICSI in relation to singleton, twin, triplet and quadruplet deliveries. It can be seen that the distribution of the deliveries was: singleton 73.7%, twin 24.0%, triplet 2.2% and quadruplet 0.1%.

Table XI shows the deliveries after FER in relation to singleton, twin, triplet and quadruplet deliveries. It is seen that the distribution of the deliveries was: singleton 84.8%, twin 14.0%, triplet 0.8% and quadruplet 0.4%.

Table XII shows the proportion of infants born as singletons, twins, triplets and quadruplets after IVF and ICSI treatment.

**Table V.** Number of embryos transferred after IVF and ICSI

	All transfers	1 embryo	%	2 embryos	%	3 embryos	%	4 embryos	%
Belgium	8015	852	10.6	3744	46.7	2727	34.0	692	25.4
Czech Republic	5638	577	10.2	1064	18.9	2983	52.9	1014	18.0
Denmark	NA	NA		NA		NA		NA	
Finland	3999	842	21.1	2994	74.9	215	5.4	1	0.0
France	30 459	4200	13.8	12 878	42.3	11 340	37.2	2041	6.7
Germany	41 490	4623	11.1	15 468	37.3	21 399	51.6	0	0.0
Greece	5209	523	10.0	1041	20.0	1677	32.2	1968	37.8
Hungary	1729	134	7.8	293	16.9	823	47.6	479	27.7
Iceland	325	36	11.1	220	67.7	69	21.2	0	0.0
Ireland	972	80	8.2	214	22.0	654	67.3	24	2.5
Italy	10 198	1148	11.3	3167	31.1	4166	40.9	1720	16.9
Netherlands	NA	NA		NA		NA		NA	
Norway	NA	NA		NA		NA		NA	
Poland	1794	292	16.3	1149	64.0	266	14.8	87	4.8
Portugal	1302	167	12.8	397	30.1	595	45.7	143	11.0
Russia	2819	338	12.0	563	20.0	635	22.5	1283	45.5
Slovenia	1275	287	22.5	795	62.4	193	15.1	0	0.0
Spain	8355	722	8.6	1366	16.3	3809	45.6	2458	29.4
Sweden	6247	699	11.2	5268	84.3	280	4.5	0	0.0
Switzerland	2415	312	12.9	1378	57.1	679	28.1	46	1.9
UK	NA	NA		NA		NA		NA	
Ukraine	738	49	6.6	114	15.4	136	18.4	439	59.5
All	132 979	15 881	11.9	52 113	39.2	52 646	39.6	12 395	9.3

NA = not available.

The sum of all transfers and the sum of transfers with 1,2,3 or 4 embryos differ by 56. This is due to an unknown number of embryos being transferred in some cases.

**Table VI.** Pregnancies and deliveries after IVF

	Cycles	Aspirations	Transfers	Pregnancies	Deliveries	Pregnancies per cycle	Pregnancies per aspiration	Pregnancies per transfer	Pregnancies per cycle	Deliveries per aspiration	Deliveries per transfer	Lost to follow-up
Belgium	NA	3914	2962	798	NA	NA	20.4%	26.9%	NA	NA	NA	NA
Czech Republic	4450	4118	3379	983	639	22.1%	23.9%	29.1%	14.4%	15.5%	18.9%	15.9%
Denmark	4941	4619	4145	1218	1031	24.7%	26.4%	29.4%	20.9%	22.3%	24.9%	6.4%
Finland	2752	2664	2360	698	517	25.4%	26.2%	29.6%	18.8%	19.4%	21.9%	2.1%
France	22 616	21 851	18 599	4752	3644	21.0%	21.7%	25.5%	16.1%	16.7%	19.6%	0.4%
Germany	27 690	23 348	19 832	5342	3436	19.3%	22.9%	26.9%	12.4%	14.7%	17.3%	11.0%
Greece	3057	2788	2476	821	613	26.9%	29.4%	33.2%	20.1%	22.0%	24.8%	5.8%
Hungary	1030	962	880	200	163	19.4%	20.8%	22.7%	15.8%	16.9%	18.5%	4.0%
Iceland	NA	189	182	77	69	NA	40.7%	42.3%	NA	36.5%	37.9%	0.0%
Ireland	689	615	564	141	117	20.5%	22.9%	25.0%	17.0%	19.0%	20.7%	5.0%
Italy	6110	5193	4673	1168	935	19.1%	22.5%	25.0%	15.3%	18.0%	20.0%	3.0%
Netherlands	9371	8370	7257	1827	NA	19.5%	21.8%	25.2%	NA	NA	NA	NA
Norway	2496	2342	2069	648	535	26.0%	27.7%	31.3%	21.4%	22.8%	25.9%	2.5%
Poland	624	585	511	117	104	18.8%	20.0%	22.9%	16.7%	17.8%	20.4%	0.0%
Portugal	735	652	561	143	116	19.5%	21.9%	25.5%	15.8%	17.8%	20.7%	6.3%
Russia	3356	3178	2867	818	486	24.4%	25.7%	28.5%	14.5%	15.3%	17.0%	NA
Slovenia	NA	825	712	168	82	NA	20.4%	23.6%	NA	9.9%	11.5%	31.5%
Spain	3234	2999	2700	785	585	24.3%	29.1%	29.1%	18.1%	19.5%	21.7%	6.0%
Sweden	3750	3416	3027	1093	833	29.1%	32.0%	36.1%	22.2%	24.4%	27.5%	0.3%
Switzerland	935	883	754	179	94	19.1%	20.3%	23.7%	10.1%	10.6%	12.5%	29.1%
UK	22 865	18 258	17 211	5066	NA	22.2%	27.7%	29.4%	NA	NA	NA	NA
Ukraine	641	624	592	154	67	24.0%	24.7%	26.0%	10.5%	10.7%	11.3%	NA
All		112 393	98 313	27 196			24.2%	27.7%				

Last column shows the number of clinical pregnancies that are lost to follow-up.

**Table VII.** Pregnancies and deliveries after ICSI

	Cycles	Aspirations	Transfers	Pregnancies	Deliveries	Pregnancies per cycle	Pregnancies per aspiration	Pregnancies per transfer	Deliveries per cycle	Deliveries per aspiration	Deliveries per transfer	Lost to follow-up
Belgium	NA	5173	5053	1402	NA	NA	27.1%	27.7%	NA	NA	NA	NA
Czech Republic	2543	2465	2259	651	387	25.6%	26.4%	28.8%	15.2%	15.7%	17.1%	4.3%
Denmark	2683	2609	2337	681	547	25.4%	26.1%	29.1%	20.4%	21.0%	23.4%	4.3%
Finland	1825	1769	1639	462	349	25.3%	26.1%	28.2%	19.1%	19.7%	21.3%	0.1%
France	20 203	19 520	17 914	4718	3658	23.4%	24.2%	26.3%	18.1%	18.7%	20.4%	12.8%
Germany	23 882	22 847	21 658	5819	3684	24.4%	25.5%	26.9%	15.4%	16.1%	17.0%	6.2%
Greece	3158	2905	2733	962	707	30.5%	33.1%	35.2%	22.4%	24.3%	25.9%	4.3%
Hungary	968	905	849	188	151	19.4%	20.8%	22.1%	15.6%	16.7%	17.8%	1.9%
Iceland	NA	151	143	42	36	NA	27.8%	29.4%	NA	23.8%	25.2%	0.0%
Ireland	472	435	409	103	81	21.8%	23.7%	25.2%	17.2%	18.6%	19.8%	1.9%
Italy	6898	6139	5525	1581	1212	22.9%	22.9%	28.6%	17.6%	19.7%	21.9%	6.4%
Netherlands	3850	3519	3306	912	NA	23.7%	25.9%	27.6%	NA	NA	NA	NA
Norway	1240	1179	1081	331	277	26.7%	28.0%	30.6%	22.3%	23.5%	25.6%	0.9%
Poland	1411	1353	1283	389	341	27.6%	28.8%	30.3%	24.2%	25.2%	26.6%	0.0%
Portugal	884	809	761	196	155	22.2%	24.2%	25.8%	17.5%	19.2%	20.4%	8.2%
Russia	953	936	893	210	118	22.0%	22.4%	23.5%	12.4%	12.6%	13.2%	NA
Slovenia	NA	608	563	128	76	NA	21.1%	22.7%	NA	12.5%	13.5%	28.0%
Spain	5155	5026	5008	1627	1285	31.6%	30.4%	32.5%	24.9%	25.6%	25.7%	2.8%
Sweden	3757	3511	3220	1069	837	28.5%	30.4%	33.2%	22.3%	23.8%	26.0%	0.0%
Switzerland	1900	1857	1672	418	209	22.0%	22.5%	25.0%	11.0%	11.3%	12.5%	35.9%
UK	7350	NA	NA	NA	NA							
Ukraine	155	155	146	27	12	17.4%	17.4%	18.5%	7.7%	7.7%	8.2%	NA
All		83 871	78 452	21 916			26.1%	27.9%				

**Table VIII.** Pregnancies and deliveries after FER

	Thawings	Transfers	Pregnancies	Deliveries	Pregnancies per thawing	Pregnancies per transfer	Deliveries per thawing	Deliveries per transfer
Belgium	1906	1577	256	NA	13.4%	16.2%	NA	NA
Czech Republic	1328	1238	224	107	16.9%	18.1%	8.1%	8.6%
Denmark	1019	852	142	115	13.9%	16.7%	11.3%	13.5%
Finland	2633	2341	472	326	17.9%	20.2%	12.4%	13.9%
France	NA	8887	1142	914	NA	12.9%	NA	10.3%
Germany*	9151	8576	1341	835	14.7%	15.6%	9.1%	9.7%
Greece	199	175	67	33	33.7%	38.3%	16.6%	18.9%
Hungary	16	16	1	0	6.3%	6.3%	0.0%	0.0%
Iceland	64	61	17	11	26.6%	27.9%	17.2%	18.0%
Ireland	NA	177	26	14	NA	14.7%	NA	7.9%
Italy	1813	1715	287	185	15.8%	16.7%	10.2%	10.8%
Netherlands	NA	1157	149	NA	NA	12.9%	NA	NA
Norway	293	196	35	27	11.9%	17.9%	9.2%	13.8%
Poland	403	275	45	39	11.2%	16.4%	9.7%	14.2%
Portugal	139	128	20	17	14.4%	15.6%	12.2%	13.3%
Russia	207	181	22	11	10.6%	12.2%	5.3%	6.1%
Slovenia	260	238	43	41	16.5%	18.1%	15.8%	17.2%
Spain	1954	1510	221	187	11.3%	14.6%	9.6%	12.4%
Sweden	1153	1005	234	179	20.3%	23.3%	15.5%	17.8%
Switzerland*	1331	1172	204	129	15.3%	17.4%	9.7%	11.0%
UK	NA	NA	NA	NA	NA	NA	NA	NA
Ukraine	5	5	2	0	40.0%	40.0%	0.0%	0.0%
All		31 482	4950			15.7%		

\*Germany and Switzerland. Cryopreservation at the 2PN stage.

**Table IX.** Pregnancies and deliveries after oocyte donation (OD)

	Donations	Transfers	Pregnancies	Deliveries	Pregnancies per donation	Pregnancies per transfer	Deliveries per donation	Deliveries per transfer
Belgium	418	NA	72	NA	17.2%	NA	NA	NA
Czech Republic	NA	NA	NA	NA				
Denmark	150	128	28	23	18.7%	21.9%	15.3%	18.0%
Finland	NA	402	109	84	NA	27.1%	NA	20.9%
France	162	NA	27	20	16.7%	NA	12.3%	NA
Germany	0	0						
Greece	362	324	95	51	26.2%	29.3%	14.1%	15.7%
Hungary	10	10	5	4	50.0%	50.0%	40.0%	40.0%
Iceland	11	11	4	3	36.4%	36.4%	27.3%	27.3%
Ireland	0	0						
Italy	495	435	124	93	25.1%	28.5%	18.8%	21.4%
Netherlands	NA	NA						
Norway	0	0						
Poland	0	0						
Portugal	0	0						
Russia	273	252	74	54	27.1%	29.4%	19.8%	21.4%
Slovenia	0	0						
Spain	1273	1128	512	410	40.2%	45.4%	32.2%	36.3%
Sweden	0	0						
Switzerland	0	0						
UK	NA	NA						
Ukraine	113	112	27	16	23.9%	24.1%	14.2%	14.3%
All	3267	2802	1077		33.0%	40.0%		

### *Pregnancies per embryo*

Table XIII presents calculations on the number of clinical pregnancies per embryo replaced after IVF and ICSI. The same parameter can also be expressed as the number of embryos replaced in order to achieve one clinical pregnancy (embryos/pregnancy). It is seen that on average the number of

pregnancies per embryo was 0.13 and the number of embryos used to achieve one clinical pregnancy was 7.8.

### *OHSS*

Table XIV presents the incidence of OHSS recorded from registers in 16 of the 22 countries. It can be seen that



**Table X.** Singleton, twin, triplet and quadruplet deliveries after IVF and ICSI

	All deliveries	Singleton deliveries	%	Twin deliveries	%	Triplet deliveries	%	Quadruplet deliveries	%
Belgium	NA								
Czech Republic	1026	636	62.0%	310	30.2%	72	7.0%	7	0.7%
Denmark	1578	1195	75.7%	379	24.0%	4	0.3%	0	0.0%
Finland	866	653	75.4%	206	23.8%	7	0.8%	0	0.0%
France	7302	5469	74.9%	1738	23.8%	95	1.3%	0	0.0%
Germany	7120	5322	74.7%	1605	22.5%	192	2.7%	1	0.0%
Greece	1320	979	74.2%	332	25.2%	9	0.7%	0	0.0%
Hungary	314	191	60.8%	102	32.5%	20	6.4%	1	0.3%
Iceland	111	90	81.1%	19	17.1%	2	1.8%	0	0.0%
Ireland	198	144	72.7%	47	23.7%	7	3.5%	0	0.0%
Italy	2147	1602	74.6%	466	21.7%	75	3.5%	4	0.2%
Netherlands	NA								
Norway	812	598	73.6%	209	25.7%	5	0.6%	0	0.0%
Poland	445	344	77.3%	92	20.7%	9	2.0%	0	0.0%
Portugal	271	188	69.4%	76	28.0%	6	2.2%	1	0.4%
Russia	604	443	73.3%	134	22.2%	26	4.3%	1	0.2%
Slovenia	158	140	83.3%	17	10.8%	1	0.7%	0	0.0%
Spain	1843	1236	67.1%	513	27.8%	91	4.9%	3	0.2%
Sweden	1670	1259	75.4%	405	24.3%	6	0.4%	0	0.0%
Switzerland	300	213	71.0%	83	27.7%	4	1.3%	0	0.0%
UK	NA								
Ukraine	NA								0.0%
All	28 085	20 702	73.7%	6730	24.0%	631	2.2%	18	0.1%

**Table XI.** Singleton, twin, triplet and quadruplet deliveries after FER

	All deliveries	Singleton deliveries	%	Twin deliveries	%	Triplet deliveries	%	Quadruplet deliveries	%
Belgium	NA								
Czech Republic	107	80	74.8%	24	22.4%	3	2.8%	0	0.0%
Denmark	115	101	87.8%	14	12.2%	0	0.0%	0	0.0%
Finland	326	290	89.0%	35	10.7%	1	0.3%	0	0.0%
France	803	695	86.6%	105	13.1%	3	0.4%	0	0.0%
Germany	835	696	83.4%	128	15.3%	11	1.3%	0	0.0%
Greece	33	14	42.4%	9	27.3%	0	0.0%	10	30.3%
Hungary	0								
Iceland	11	10	90.9%	1	9.1%	0	0.0%	0	0.0%
Ireland	14	9	64.3%	5	35.7%	0	0.0%	0	0.0%
Italy	185	156	84.3%	27	14.6%	2	1.1%	0	0.0%
Netherlands	NA								
Norway	27	27	100.0%	0	0.0%	0	0.0%	0	0.0%
Poland	39	34	87.2%	5	12.8%	0	0.0%	0	0.0%
Portugal	17	15	88.2%	2	11.8%	0	0.0%	0	0.0%
Russia	11	9	81.8%	2	18.2%	0	0.0%	0	0.0%
Slovenia	23	22	95.6%	1	4.3%	0	0.0%	0	0.0%
Spain	178	150	84.3%	23	12.9%	4	2.2%	1	0.6%
Sweden	179	153	85.5%	25	14.0%	1	0.6%	0	0.0%
Switzerland	129	101	78.3%	28	21.7%	0	0.0%	0	0.0%
UK	NA								
Ukraine	NA								
All	2925	2481	84.8%	409	14.0%	22	0.8%	11	0.4%

1083 cases of OHSS were recorded after 114 628 cycles, corresponding to 0.9% of all stimulated cycles.

### PGD

PGD was recorded in five countries: Denmark, Greece, Hungary, Italy and Portugal. A total of 131 aspirations resulted in 82 transfers, 30 pregnancies and 19 deliveries.

### Maternal death

One case of maternal death was recorded.

### Discussion

The present report is the third consecutive European report on IVF data covering treatment cycles from 1997, 1998 and 1999

**Table XII.** Percentage of infants born as singletons, twins, triplets and quadruplets after IVF and ICSI

	All infants	Singletons	Twins	Triplets	Quadruplets
Belgium	NA				
Czech Republic	1503	62.0%	41.3%	14.6%	1.9%
Denmark	1965	60.8%	38.6%	0.6%	0.0%
Finland	1086	60.1%	37.9%	1.9%	0.0%
France	9230	59.3%	37.7%	3.1%	0.0%
Germany	9112	58.4%	35.2%	6.3%	0.0%
Greece	1670	58.6%	39.8%	1.6%	0.0%
Hungary	459	41.6%	44.4%	13.1%	0.9%
Iceland	134	67.2%	28.4%	4.5%	0.0%
Ireland	259	55.6%	36.3%	8.1%	0.0%
Italy	2775	57.7%	33.6%	8.1%	0.6%
Netherlands	NA				
Norway	1058	59.0%	39.5%	1.4%	0.0%
Poland	555	62.0%	33.2%	4.9%	0.0%
Portugal	362	51.9%	42.0%	5.0%	1.1%
Russia	793	55.9%	33.8%	9.8%	0.5%
Slovenia	177	79.0%	19.0%	1.7%	0.0%
Spain	2547	48.5%	40.3%	10.7%	0.5%
Sweden	2087	60.3%	38.8%	0.9%	0.0%
Switzerland	391	42.5%	42.5%	3.1%	0.0%
UK	NA				
Ukraine	NA				
All (range)	36 135	(41.6–79.0%)	(19.0–44.4%)	(0.6–14.6%)	(0.0–1.9%)

**Table XIII.** Number of pregnancies for each embryo transferred, and the number of pregnancies per transferred embryo (IVF and ICSI)

	No of embryos transferred	Pregnancies	Pregnancies/embryo	Embryos/pregnancy
Belgium	19 289	2200	0.11	8.8
Czech Republic	15 710	1634	0.10	9.6
Denmark*	12 316	1899	0.15	6.5
Finland	7479	1160	0.16	6.4
France	70 099	9470	0.14	7.4
Germany	99 756	11 161	0.11	8.9
Greece	15 508	1783	0.11	8.7
Hungary	5105	388	0.08	13.2
Iceland	614	119	0.19	5.2
Ireland	1912	244	0.13	7.8
Italy	26 860	2749	0.09	9.8
Netherlands	NA	2739		
Norway*	5985	959	0.16	6.2
Poland	3736	506	0.14	7.4
Portugal	3318	339	0.10	9.8
Russia	8501	1028	0.12	8.3
Slovenia	2456	296	0.12	8.3
Spain	24 713	2412	0.10	10.2
Sweden	12 075	2162	0.18	5.6
Switzerland	5289	597	0.11	8.9
UK	NA			
Ukraine	2441	181	0.07	13.5
All	343 162	44 026	0.13	7.8

\*Denmark and Norway. Estimates based on a mean number of embryos transferred of 1.90.

respectively. Europe now has reports on ART, as has been the case for some years in Australia and New Zealand, Latin America and the USA (SART/ASRM, 2002).

Four new countries have joined the EIM's consortium and contribute to the third report and now 22 countries participate, covering the whole of Western Europe with the exception of Austria (who plan to join next year) and Luxembourg where no IVF clinics exist.

Eight of the participating countries already have complete coverage in their reporting systems: Denmark, Finland, France, Iceland, The Netherlands, Norway, Sweden and Switzerland. Germany has improved its coverage, which is now estimated to include around 90% of the activities in that country. Belgium, Hungary and Switzerland have announced the plan to advance their systems into mandatory registers.

The number of reported cycles continues to grow. This year



**Table XIV.** Complications to IVF. Ovarian hyperstimulation syndrome (OHSS), bleeding and infections resulting in admission to hospital

	Cycles	OHSS	OHSS %	Bleeding	Infection
Belgium	8187	148	1.8%	19	10
Czech Republic	6993	74	1.1%	4	1
Denmark		NA		NA	NA
Finland		NA		NA	NA
France		NA		NA	NA
Germany	51 572	389	0.8%	2	2
Greece	6215	29	0.5%	0	1
Hungary	1998	36	1.8%	3	3
Iceland	340	1	0.3%	1	0
Ireland	1161	8	0.7%	0	0
Italy	13 008	118	0.9%	33	4
Netherlands		NA		NA	NA
Norway	3736	16	0.4%	2	0
Poland	2035	31	1.5%	0	2
Portugal	1621	6	0.4%	1	0
Russia	4309	118	2.7%	7	3
Slovenia	1433	5	0.3%	11	2
Spain	8389	60	0.7%	1	1
Sweden		NA		NA	NA
Switzerland	2835	21	0.7%	0	1
UK		NA		NA	NA
Ukraine	796	23	2.9%	0	0
All (%)	114 628	1083	0.9%	84	30

538 clinics reported 258 460 cycles, which is an increase of 11% compared with 1998. From 1997 to 1998 the increase was 14%. Altogether this means an increase of 25% from 1997 to 1999. This marked increase over 2 years is partly due to a better coverage in the reporting systems but may also be due to a true expansion of activities in some countries. The latest World Report on IVF data (Adamson *et al.*, 2002) from 1998, recorded 388 000 procedures world-wide, estimated to represent some 80% of all activities. This means that about 60% of recorded IVF activities globally come from Europe.

Within Europe the largest contributions come from Germany with 60 000 cycles followed by France with 52 000 cycles and the UK with 30 000 reported cycles. It should be noted that the figure from the UK is lower compared with previous years due to technical problems in their reporting system.

The proportion of standard IVF procedures to ICSI procedures remains the same this year compared with last year (56.6% standard IVF and 43.4% ICSI), but in some countries such as Belgium, Greece, Italy, Poland, Portugal, Spain and Switzerland ICSI is more prevalent than IVF. The number of FER cycles remained constant whereas the number of OD cycles showed a small decrease.

The availability of services remained highest in Denmark with 1659 cycles per million inhabitants. It was also high in the other Nordic countries, in The Netherlands and in France. The average number of treatment cycles per million inhabitants in those countries with complete coverage in their reporting was a little below 1000. The proportion of IVF children to all children born was again highest in the Nordic countries with Iceland at 3.6%, Denmark 3.2%, Finland 2.7% and Sweden 2.6%.

The number of embryos transferred in IVF and ICSI cycles differed substantially between countries. The mean number of

single embryo transfers remained at about 12%, whereas the proportion of dual embryo transfers increased to 39.2% (compared with 37.2% and 35.7% for 1998 and 1997 respectively). The proportion of three embryo transfers was 39.6%, representing a small decrease from the previous year where it was 42.0%. Four embryo transfers or more remained constant at 9.3%. Finland, Sweden and Slovenia reported no embryo transfers of  $\geq 4$ , and also a low proportion of three embryo transfers, whereas some other countries still reported very high proportions of  $\geq 4$  embryos transferred.

Pregnancy rates continued to increase slightly. For standard IVF the mean pregnancy rate per transfer was 27.7% (compared with 27.0% for 1998), for ICSI 27.9% (versus 26.8%), for FER cycles 15.7% (versus 14.9%) and for OD cycles 40.0% (versus 30.6% for 1998). Again there were quite large differences between different countries. As an example the pregnancy rate per transfer for IVF cycles varied between 22.7–42.3%.

Delivery rates showed similar trends but one problem remains: in some countries the lost to follow-up rate for deliveries is quite high. Therefore, delivery rates are less valid when compared with pregnancy rates.

One other possibility for reporting success rates would be to report on singleton delivery rates separately. The consortium plans to do so, as soon as the delivery rates are more valid. If only singleton pregnancies are accepted as a success, only ~20% of transfers resulted in a successful outcome.

The occurrence of multiple deliveries did not change from 1998 (26.3%) to 1999 (26.3%). Neither did the twin or the triplet rate change from 1998 to 1999. The triplet rate remained at 2.2% of all deliveries, so the reduction seen from 1997 to 1998 did not continue.

The proportion of singleton deliveries after IVF and ICSI

varied between countries within a range of 60.8–83.3%, twin rates from 10.8–32.5% and triplet rates from 0.3–6.4%.

The practice of fetal reduction is very different in different European countries. In some it is quite often practised whereas in others it is not practised at all. The consortium has not, so far, been able to collect reliable data on fetal reductions but is planning to do so in future reports. The proportion of infants (rather than deliveries) for singletons varied from 42–79%, for twins between 19–44% and for triplets between 0.6–15%. The proportion of quadruplets was very low.

Alternative ways of presenting success rates for the whole of Europe showed a pregnancy rate of 0.13 per embryo replaced and that 7.8 embryos needed to be replaced to obtain one pregnancy. These calculations include both singleton and multiple pregnancies.

In this report, for the first time, data on OHSS was collected. Data was not available from all countries. From those reporting, the overall proportion of OHSS was close to 1% with a high of 2.7% and a low of 0.3%. Of course various definitions and also various clinical policies make comparisons difficult.

Altogether 131 aspirations were followed by PGD, and of these 19 babies were delivered. It is expected that these activities will expand in the future. Certainly, a proportion of countries perform PGD, that are not reported within the EIM.

To summarize, this third ESHRE report on IVF cycles carried out in 1999 in Europe shows a continuing expansion

of the register, both for participating countries, participating clinics and number of cycles reported. Trends are now becoming visible and there is a trend towards better efficacy. The combined multiple pregnancy rate was reduced from 1997 to 1998, but no further reduction was recorded from 1998 to 1999. With new knowledge on the safety of these procedures it becomes increasingly obvious that the proportion of multiple pregnancies is still much too high, although, at present, quite different in different European countries.

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### List of participating countries and centres

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Aalst: O.L.V. Ziekenhuis – Gynaecologie en Verloskunde  
Antwerp: Algemeen Ziekenhuis Middelheim – Dienst Fertilititeit

Bonheiden: Imeldaziekenhuis – I.V.F. Centrum Bonheiden  
Brugge: Academisch Ziekenhuis Sint-Jan – BIRTH Fertilitetskliniek (*In cooperation with : Sint-Lucas Ziekenhuis*)

Brussels: Akademisch Ziekenhuis – V.U.B. – Centrum voor Reproductieve Geneeskunde; Centre Hospitalier Interrégional Edith Cavell – Centre de Procréation Assistée; Cliniques Universitaires Saint-Luc – UCL – Unité de FIV; Hôpital Erasme U.L.B.- Centre de FIV – Service de Gynécologie; Hôpital Universitaire Saint-Pierre – U.L.B – Clinique de Procréation Médicalement Assistée

Charleroi: Clinique Notre-Dame, Gynécologie et Obstétrique  
Edegem: U.I.A – Afdeling voor Infertilititeit

Genk: St.-Jansziekenhuis – Centre for Reproductive Medicine  
Gent: A.Z. Jan Palfijn – Centrum voor Fertilitetstherapie; Gynaecologisch Centrum; Universitair Ziekenhuis Gent – R.U.G. – Infertilitetst centrum – Vrouwenkliniek

Kortrijk: Sint-Niklaas Kliniek – Fertilititeit, IVF en ET – Dienst Gynaecologie

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Libramont: Clinique Notre-Dame, Centre d'Infertilité

Loverval: Institut de Morphologie Pathologique – Laboratoire de F.I.V.

Namur: Centre Hospitalier Régional de Namur  
Rocourt (Liège) : Clinique Saint Vincent Centre Liégeois pour l'Etude et le Traitement de la Stérilité

Roeselare: Heilig Hartziekenhuis, Gynecologie  
Vilvoorde: Van Helmontziekenhuis – Fertilitetst centrum SIMAF

Wilrijk: A.Z. St.-Camillus/St.-Augustinus – Infertilititeit

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Ostrava: Gyncentrum

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#### Denmark

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Brædstup: Fertilitetsklinikken Brædstrup Sygehus

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Horsens: Horsens Fertilitetskliniek

Odense: Fertilitetsklinikken Odense Universitetshospital; Odense IVF-Klinik

Skive: Fertilitetsklinikken Skive Sygehus

#### Finland

Helsinki: Diacor; Eira Hospital; Family Federation of Finland  
Helsinki; Felicitas; Helsinki University Central Hospital

Joensuu: Northern Carelia Central Hospital

Jyväskylä: Central Finland Central Hospital

Kuopio: In-Tiimi Kuopio; Kuopio University Central Hospital; Lappeenranta Fermedi: Fermedi (pls note)

Oulu: Family Federation of Finland Oulu; Oulu University Central Hospital

Tampere: AVA Tampere; Tampere University Central Hospital

Turku: AVA Turku; Family Federation of Finland Turku; Koeputki Oy; Turku University Central Hospital

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Besancon: CHU; Les Cigognes

Blanc Mesnil; Clinique

Bois-Guillaume: Saint Antoine

Bondy: Jean Verdier

Bordeaux: Pellegrin Fédération; Pellegrin Gynéco  
Obstétrique A

Brest: CHU; Pasteur

Bruges: Jean Villar

Caen: CHRU

Cayenne: CHG

Charleville-Mezieres: CH

Clamart: Antoine Bécèle

Clermont-Ferrand: CHU  
 Cormeiller en Parisis: Clinique  
 Courbevoie: CH-La Défense  
 Dijon: Chenove; CHR  
 Epinal: Arc en ciel  
 Equeudreville: Cotentin  
 Grenoble: Belledonne; CHU  
 Guadeloupe-Les Abymes : Les Rosiers  
 Guilhaers Granges: Pasteur  
 Le Chesnay: Parly II  
 Le Havre: CH  
 Le Mans: Tertre Rouge  
 Le Port: Jeanne d'Arc  
 Lille: Polyclinique du Bois; Jeanne de Flandres  
 Limoges: CHRU  
 Lorient : CH  
 Lyon Bron: Ste Marie-Thérèse  
 Lyon: Croix Rousse; Edouard Herriot; Montplaisir; Sainte Anne Lumière  
 Maisons-Laffitte: Sully  
 Marseille: Conception; Saint Joseph; Wulfran Puget  
 Martinique – Fort de France: Sainte Marie  
 Metz: Sainte Croix  
 Montpellier: CHU; Saint Roch  
 Mulhouse: Diaconat  
 Nancy: A Pinard; Majorelle  
 Nantes: CHU; N.D. de Grâce; St Herblain / Atlantique  
 Neuilly: Chérest; Hôpital Américain  
 Nice: CHU; Saint Georges  
 Nimes: CHRU  
 Paris: Bichat; Cochin; Diaconesses; Les Bluets; La Muette; Montsouri; Pitié Salpêtrière; Saint Vincent de Paul; Spontini; Tenon  
 Pau: Lagrange  
 Perigueux: Francheville  
 Perpignan: Saint Pierre  
 Poissy: CHI  
 Poitiers: CHU  
 Reims: CHU; Courlancy  
 Rennes: CHRU Sud; La Sagess  
 Roanne: CH  
 Rouen: CHU  
 Saint Etienne: Michelet  
 Saint-Jean: L'Union et le Vaurais  
 Saint-Saulve: Le Parc  
 Schiltigheim: CMCO  
 Sevres: J. Rostand  
 Toulon: Saint Michel  
 Toulouse: CHU; Saint Jean Languedoc  
 Tours: CHU; Parc Clinique  
 Vitry sur Seine: Les Noriets

### **Germany**

Aachen: Universitätsklinikum der RWTH Aachen, Frauenklinik für Gynäkologische Endokrinologie und Reproduktionsmedizin; Prof. Dr O. Bauer

Aalen: Dr R. Rau  
 Augsburg: Gemeinschaftspraxis Dr Warnecke, Dr Hiller, Dr Bauer, Dr Kraus  
 Bad Münden: Zentrum für IVF und Reproduktionsmedizin, Deutsche Klinik Bad Münden  
 Bayreuth: Klinikum Bayreuth  
 Bedburg/Erft: Praxis Dieter Struller  
 Berlin: Frauenklinik Charité, Abteilung für Endokrinologie und Reproduktionsmedizin; Praxisklinik für Fertilität, Gemeinschaftspraxis Dr D.J.Peet, Dr P.Sydow; Gemeinschaftspraxis Dr med. Detlef H.G.Temme, Dr med. Rolf Metzger; Gemeinschaftspraxis Dr M.Bloechle, Dr S.Marr, Dr G.Wilke; Charité, Med. Fakultät der Humboldt-Universität zu Berlin, Campus Virchow-Klinikum, Klinik für Frauenheilkunde und Geburtshilfe Reproduktionsmedizin; Fertility Center Berlin  
 Bielefeld: Frauenklinik Städtische Krankenanstalten  
 Bonn: Rheinische Friedrich-Wilhelms-Universität, Abteilung für Klinische Endokrinologie und Reproduktionsmedizin  
 Bremen: Zentrum für Kinderwunschbehandlung; Evangelische Diakonissenanstalt, Klinik für Frauenheilkunde  
 Darmstadt: Frauenklinik Klinikum Darmstadt  
 Deggendorf: Institut für Reproduktionsmedizin  
 Dortmund: Gemeinschaftspraxis Dres. Med. S.Dieterle and A.Neuer  
 Dresden: Frauenarztpraxis Dr H.J.Held; Universitätsklinik Carl-Gustav-Carus, IVF Abteilung  
 Düsseldorf: Gemeinschaftspraxis Dr H.C.Verhoeven, Dr med. M.C.W.Scholtes, Dipl.-med. K.Marx, Dr med. M.Schulte; Frauenklinik der Heinrich-Heine-Universität; Krankenhaus Benrath  
 Erlangen: Gemeinschaftspraxis Prof. Dr Bregulla, Dr Hamori, Dr Behrens; Dr J.van Uem; Universitätsfrauenklinik  
 Essen: Gemeinschaftspraxis Dr Th. Katzorke, Dr D.Propping, Dr E.Willms; Universitätsklinikum  
 Esslingen: Partnerschaftsgesellschaft Dr P.Hermann, Dr J.E.Costea, und Partner; Städtische Frauenklinik  
 Frankfurt a. M.: Krankenhaus Nordwest  
 Freiburg: Gemeinschaftspraxis Dr Weitzell, Dr Thiemann, Prof. Dr F.Geisthövel; IVF-Ambulanz der Universitäts-Frauenklinik Freiburg  
 Gelsenkirchen: Wissenschaftsark Gelsenkirchen, Schwerpunkt Kinderwunschtherapie  
 Gießen: Gesellschaft zur Förderung der In-Vitro-Fertilisation und Reproduktionsmedizin GbR; Arbeitsgruppe Endokrinologie, Fortpflanzungsmed. und Mikrochirurgie der Justus-Liebig-Universität  
 Göttingen: Frauenklinik Georg-August-Universität; Kinderwunschzentrum  
 Grevenbroich: Gemeinschaftspraxis Dr Kaiser, Dr Tigges, Dr Tuchel  
 Halle/Saale: Klinikum Kröllwitz, Klinik und Poliklinik für Geburtshilfe und Reproduktionsmedizin  
 Hamburg: Fertility Center Hamburg, Gemeinschaftspraxis Fischer, Naether, Rudolf; Universitätskrankenhaus Eppendorf, Klinik für Frauenheilkunde; Gemeinschaftspraxis Prof. Dr



H.G.Bohnet, PD Dr U.A.Knuth; Gemeinschaftspraxis Dres. Leidenberger, Weise, Hinrichsen,  
 Graf and Partner GbR; Gemeinschaftspraxis Dr G.Bispink, Dr A.Horn, Dr Michel, Dr Seeler  
 Hannover: Frauenklinik der MHH am Oststadt-Krankenhaus; Gynäkologische Gemeinschaftspraxis Dr K.Bühler, Dr Müseler-Albers, Dr H.P.Arendt  
 Heidelberg: Ruprecht-Karls-Universität, Gyn. Endokrinologie und Fertilitätsstörungen; Arbeitsgruppe Fortpflanzungsmedizin  
 Hildesheim: Gemeinschaftspraxis Dr F.-J.Algermissen, Dr P.F.Justus, Dr G.Wilke  
 Homburg: Universitätskliniken des Saarlandes, Frauenklinik und Poliklinik  
 Jena: Gemeinschaftspraxis PD Dr H.Fritzsche, Prof. Dr E.Günther  
 Karlsruhe: Karlsruher IVF-Programm, AG für Fortpflanzungsmedizin, Praxis Dr V.Wetzel  
 Kiel: Klinik für Gynäkologie der Christian-Albrechts-Universität zu Kiel  
 Köln: PAN Klinik am Neumarkt; Klinik für Frauenheilkunde und Geburtshilfe der Universitätsklinik zu Köln  
 Leipzig: Gemeinschaftspraxis Dres. F.A.Hmeidan, P.Jogschies, A.Gabert; Universitätsfrauenklinik Leipzig, Abteilung Reproduktionsmedizin  
 Lübeck: Universitätsklinikum Lübeck, Klinik für Frauenheilkunde und Geburtshilfe  
 Magdeburg: Klinik für Reproduktionsmedizin und Gyn. Endokrinologie  
 Mannheim: Universitätsfrauenklinik GmbH, Klinikum Mannheim  
 Marburg: Zentrum für Frauenheilkunde und Geburtshilfe Klinikum der Philipps-Universität  
 Minden: Dr O.P.Happel, Dr O.Buurman, Fachärzte für Frauenheilkunde  
 Mönchengladbach: Gemeinschaftspraxis Dr D.Döhmen, Dr Thomas Schalk  
 Mülheim: Evangelisches Krankenhaus, Klinik für Frauenheilkunde  
 München: Gemeinschaftspraxis Dr W.Bollmann, Dr Th.Brückner, Dr U.Noss, Dr M.Roemisch, Prof. Dr W.Albrich; Gemeinschaftspraxis Prof. Dr med. H.-K.Rjosk, PD Dr, med. A.Römmeler, Dr med. H.Lacher, Frauenärzte; Frauenklinik Dr Krüsmann, IVF-Zentrum; Klinikum der Universität München-Großhadern, Klinik und Poliklinik für Frauenheilkunde und Geburtshilfe  
 Münster: Dr L.D.Belkien; Klinik und Poliklinik für Geburtshilfe und Frauenheilkunde und des Instituts f. Reproduktionsmedizin des Zentrums für Frauenheilkunde Westf. Wilhelms-Universität, Bereich für Assistierte Reproduktionsmedizin  
 Mutlangen: Stauferklinik Schwäbisch-Gmünd  
 Neubrandenburg: Klinikum Neubrandenburg, Klinik für Frauenheilkunde und Geburtshilfe  
 Neuwied: Dr J.Beran  
 Oldenburg: Tagesklinik Dr E.Dewitt; Dr J.Hennefründ, Dr Ochs-Ring; Dr med. Saif Jibril

Osnabrück: Gemeinschaftspraxis Dr W. von der Burg, Dr I.Coordes  
 Pforzheim: Zentrum f. Reproduktionsmedizin in d. Zentralklinik  
 Prien: Gemeinschaftspraxis Dr M.Lehnert, PD Dr R.Steldinger  
 Regensburg: Gemeinschaftspraxis Dr med. A.F.Liebl, Prof. Dr med. B.Seifert  
 Remscheid: Gynäkologische Endokrinologie und Reproduktionsmedizin am Klinikum Dr Johannes Luckhaus  
 Rostock: Frauenklinik Rostock, Med. Fakultät der Universität  
 Saarbrücken: Gemeinschaftspraxis Dr J.Happel, Dr L.Happel, Dr M.Thaele  
 Schwerin: Medizinisches Zentrum der Landeshauptstadt Schwerin, Klinikum Schwerin  
 Stralsund: Klinikum der Hansestadt Stralsund GmbH, Klinik für Gynäkologie und Geburtshilfe  
 Stuttgart: Dr med. Mayer-Eichberger  
 Tübingen: Frauenklinik Eberhard-Karls-Universität  
 Ulm: Universitätsklinikum; Zentrum für Sterilitätsbetreuung  
 Wiesbaden: Zentrum für Reproduktionsmedizin  
 Würzburg: Gemeinschaftspraxis Dr R.Mai, Dr W.Schmitt; Universitätsfrauenklinik

#### *Greece*

No list

#### *Hungary*

Budapest: 'Jahn Ferenc' Hospital, Department of OB/GYN; 'Nyiro Gyula' Hospital, Department of OB/GYN; Semmelweis University of Medicine, 1<sup>st</sup> Department of OB/GYN; St. John's Hospital, Department of OB/GYN  
 Debrecen: Medical University of Debrecen, Department of OB/GYN  
 Pécs: Medical University of Pécs, Department of OB/GYN

#### *Iceland*

Reykjavik: IVF-Unit, National University Hospital

#### *Ireland*

Dublin: Hari, Rotunda Hospital – JMS  
 Galway: IVF Unit, UCH Galway

#### *Italy*

Abano Terme (Pd): Casa di Cura Abano Terme –Centro Ripr. Assistita  
 Bari: Clinica S. Maria; Studio Medico 'San Luca'; Studio Associato CECOS  
 Bologna: S.I.S.M.E.R.; Tecnobios; Centro Sterilità e Fecondazione Assiitata Università di Bologna  
 Bolzano: Ospedale di Bolzano  
 Brescia: Istituto Clinico 'Città di Brescia'  
 Bressanone (Bz): Ospedale di Bressanone  
 Brunico (Bz): Ospedale di Brunico  
 Cagliari: Ospedale Regionale Microcitemie; Università di Cagliari  
 Cassano Murge (Ba): Casa Bianca

Catania: C.R.A.  
 Cittadella (Pd): Ospedale di Cittadella  
 Firenze: Centro 'Demetra'; Centro 'Futura'  
 Fossano (Cn): Ospedale di Fossano  
 Genova: Biotech; Università di Genova  
 Gragnano (Na): A.O.G.O.I.  
 Lecce: Centro di Fecondazione Assistita; Centro Studi Riproduzione Umana  
 Manduria (Ta): Ospedale M. Giannuzzi  
 Mantova: Ospedale C. Poma  
 Mercogliano (Av): Diagnostica Medica  
 Messina: Centro di Riproduzione Umana  
 Mestre (Ve): ARC-STER  
 Milano: Fondazione S. Raffaele del Monte Tabor; Polo Universitario S. Paolo  
 Modena: Università di Modena e Reggio Emilia  
 Monza (Mi): Centro 'Biogenesi'  
 Motta di Livenza (Tv): Ospedale di Motta di Livenza  
 Napoli: Centro Mediterraneo di Fecondazione Assistita  
 Nardò (Le): Tecnomed – Centro Medico Biologico  
 Padova: Studio 'Gemma'; S.I.S.M.E.R. Padova  
 Palermo: Centro 'Andros'; Centro Biologia della Riproduzione  
 Parma: Università di Parma  
 Pesaro: Centro Salus  
 Pescara: Villa Serena  
 Pisa: Casa di Cura S. Rossore; Università di Pisa  
 Reggio Emilia: Studio Diagnostico Raul Palmer  
 Rimini: Ospedale di Rimini  
 Roma: European Hospital; Genesis  
 Rozzano (Mi): Istituto Clinico Humanitas  
 Salerno: C.M.R.; Human Fertilization Center  
 Sassari: Università di Sassari  
 Sora (Fr): Centro S.T.S.  
 Torino: Laparoscopy and Fertility Center; Centro LIVET; Ospedale S. Anna; Centro Diagnosi e Cura dell'Infertilità di Coppia; Fertilib  
 Trieste: Ospedale Burlo Garofalo  
 Udine: S.I.S.M.E.R. Udine  
 Varese: Centro Diagnostico Varesino

### ***The Netherlands***

Amsterdam: Academisch Medisch Centrum, Vrije Universiteit Medisch Centrum  
 Eindhoven: Catharina Ziekenhuis  
 Groningen: Academisch Ziekenhuis Groningen  
 Leiden: Leids Universitair Medisch Centrum, Stichting Medisch Centrum voor Geboorteregeling  
 Maastricht: Academisch Ziekenhuis Maastricht  
 Nijmegen: Universitair Medisch Centrum St Radboud  
 Rotterdam: Academisch Ziekenhuis Rotterdam  
 Tilburg: St. Elisabeth Ziekenhuis  
 Utrecht: Universitair Medisch Centrum  
 Voorburg: Reiner de Graaf Groep  
 Zwolle: Isala Klinieken

### ***Norway***

Bergen: Haukesund Sykehus, Universitetssykehus i Bergen  
 Haugesund: Fylkesykehuset i haugesund  
 Oslo: Rikshospitalet, Universitetssykehus. Ullevål Universitetssykehus, Volvat Medisinske Senter, Omnia Fertilitetssenteret  
 Tromsø: Universitetssykehuset Nord-Norge  
 Trondheim: St. Olavs Hospital, Universitetssykehus

### ***Poland***

Bialystok: Department of Gynecology, Medical Academy of Bialystok  
 Bytom: Department of Obstetrics and Gynecology, Silesian Medical University  
 Warsaw: Private Policlinic 'Ovum'

### ***Portugal***

Guimarães: Hospital N. S. da Oliveira  
 Lisboa: CLIFER; CLINDIGO; Hospital de Santa Maria; Maternidade Dr Alfredo da Costa  
 Oporto: Centro de Genética Prof. Alberto Barros; Maternidade Júlio Dinis  
 Vila Nova de Gaia: Centro Hospitalar

### ***Slovenia***

Ljubljana: Medical Center Ljubljana  
 Maribor: Maribor Hospital  
 Postojna: Postojna Hospital

### ***Spain***

Alicante: Instituto Bernabeu; Unidad de Reproduccion Vistahermosa  
 Aravaca: Urh. Garcia del Real  
 Badajoz: Clinica Gonzalez Carrera  
 Baracaldo (Vizcaya): Hospital de Cruces  
 Barbera del Vallés: Centro de Reproduccion Humana del Valles Occidental  
 Barcelona: CIRH, Clinica de Reproduccion Asistida; Hospital Clinico de Barcelona; Hospital de la Santa Creu i Sant Pau; Instituto de Medicina Reproductiva; Instituto Marques; Instituto Universitario Dexeus  
 Bilbao: Clinica Euskalduna  
 Cordoba: Centro Mesa Dominguez; Clinica Bau  
 Godella: Instituto de Medicina Reproductiva  
 Granda: Centro de Reproduccion Asistida y Genética Reproductiva; Centro de reproduccion Humana; Hospital universitario 'Virgen de las Nieves'  
 Llobregat: Hospital de Llobregat, Centre Tocoginecologico  
 La Flota: IVI Murcia  
 Lleida: CIRH Lleida  
 Madrid: Centro de Reproduccion Humana; Clinica Tambre; Fundacion Jimenez Diaz; Hospital Maternal 'La Paz'; Instituto Ginecologico 'La Cigüena'; IVI Madrid; Madrid FIV  
 Malaga: Centro Gutemberg  
 Oviedo: CEFIVA



## ESHRE

Palma de Mallorca: Centro de Fecundation In Vitro Baleares; Instituto Balear de Infertilidad

Reus: Instituto de Infertilidad y Reproduccion Humana Conceptum

Sabadell: Centre Medic Fuster

San Sabastian: Clinica Quiron Donostria

Sevilla: Centro Hispalense de Reproduccion Asistida

Valencia: IVI Valencia

### *Russia*

Cheboksary: Republican Center for Family Planning and Reproduction, Ministry of Health Chuvashia Republic. Director A.V.Samoilova

Krasnoyarsk: Center for Reproductive Medicine. Director A.V.Svetlakov

Moscow: IVF Department of Sechenov Medical Academia. Head of Dept. E.A.Kalinina

Medical Center for IVF. Director E.I.Pomeranceva. Center for Family Planning and Reproduction, IVF Department. Head of Dept. A.S.Kalugina Center for Infertility Treatment 'IVF'. Director V.M.Zdanovsky

Center 'Lera'. Director V.M.Zdanovsky, Medical Center for Infertility Treatment 'Embryon'. Director K.N.Kechiayn Rostov-Don: Center of Human Reproduction and IVF. Medical Director A.V.Kuzmin

Samara: Medical Company 'IDK'. Director V.I.Karnauch

Saratov: Region Center for Family Planning and Reproduction. Director N.P.Smirnova

St.Petersburg: International Center for Reproductive Medicine, Ob/Gyn Ott Institute. Medical Director Proffesor V.S.Korsak, Center for Family Planning, Pushkinsky District. Medical Director A.V.Ivanov Russian Finnish Medical Center 'AVA-Peter'. Director N.V.Kornilov.

Baltic Institute of Human Reproductology. Director A.I.Nikitin Tumen: Center for Reproductive Medicine 'Mercury'. Medical Director E.V.Popenko, Medical Center 'Malish'. Medical Director N.M.Kovalev

Voroneg: Region Center for Family Planning and Reproduction, IVF Department. Director N.N.Shemarinova

Vladivostok: Medical Center for IVF 'Santa Maria'. Director V.A.Belikov

### *Sweden*

Falun: IVF-enheten Falu lasarett

Göteborg: Fertilitetscentrum, Carlanderska sjukhemmet; Sahlgrenska universitetssjukhuset

Linköping: Universitetssjukhuset

Malmö: Curakliniken; Oeresundkliniken; Malmö allmänna sjukhus

Stockholm: Huddinge sjukhus; Karolinska sjukhuset; Lucinakliniken; Sophiahemmet

Umeå: Norrlands universitetssjukhus

Uppsala: Akademiska sjukhuset; Carl von Linnékliniken

Örebro: Regionsjukhuset

### *Switzerland*

Baden: Reproduktionsmedizinisches Zentrum Kantonsspital

Basel: IVF-ICSI Zenter Institut Dr Viollier, Dr N. Pavic, Dr J-C. Spira; Universitäts-Frauenklinik, Abt. für gynäkologische Endokrinologie und Reproduktionsmedizin

Bellinzona: ProCrea, Centro Fertilità della Svizzera Italiana

Bern: Lindenhofspital, IVF-Labor; Universitätsfrauenklinik, Abt. für Gynäkologie, IVF und Reproduktionsmedizin, Inselspital

Frauenfeld-Kreuzlingen: IVF Zenter ILAMED

Genève: Centre Privé de Procréation Médicalement assistée de la Clinique de Champel Elysée; Hôpital Universitaire, Clinique et Policlinique de Stérilité et d'Endocrinologie Gynécologique

Laufen: Dr A. Koller

Lausanne: Centre Vanderlick-Montchoisi; CHUV, Unité de Médecine de la Reproduction et d'Endocrinologie Gynécologique

Locarno: Centro Cantonale di Infertilità, Servizio di Endocrinologia Ginecologica

Luzern: Kantonalspital, Sterilitätssprechstunde Frauenklinik, IVF-ICSI Labor

Schaffhausen-Zürich: Zentrum für Reproduktionsmedizin, Dr P Fehr, Dr Singer

Winterthur: Dr R. Köppel

Zollikerberg: IVF Zürich

Zürich: Universitätsspital, Klinik für Endocrinologie

### *Ukraine*

Kharkiv: Center for Reproductive Medicine 'Implant'

Kyiv: Institute of Reproductive Medicine; Isida IVF Clinic

Odessa: Center for Reproductive Medicine 'Remedi'

### *UK*

No list.