

**Assisted Conception Series  
Number 2**

**Assisted Conception  
Australia and New Zealand  
1994 and 1995**

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# **Collaborating IVF and GIFT units**

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## Abbreviations

NSW	-	New South Wales
Vic	-	Victoria
Qld	-	Queensland
WA	-	Western Australia
SA	-	South Australia
Tas	-	Tasmania
ACT	-	Australian Capital Territory
NT	-	Northern Territory
AIHW	-	Australian Institute of Health and Welfare
NPSU	-	National Perinatal Statistics Unit
GIFT	-	gamete intrafallopian transfer
GnRH <sub>a</sub>	-	gonadotrophin-releasing hormone analogues
hCG	-	human chorionic gonadotrophin
ICSI	-	intracytoplasmic sperm injection
IVF	-	in-vitro fertilisation
na	-	not available
PROST	-	pronuclear stage transfer
PZD	-	partial zona dissection
SUZI	-	subzonal insemination
TEST	-	tubal embryo stage transfer
ZIFT	-	zygote intrafallopian transfer

# Highlights

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- In Australia, infertile couples were treated by in-vitro fertilisation (IVF) and gamete intrafallopian transfer (GIFT) in 23 IVF units in 1994 and in 24 units in 1995. New Zealand had 5 IVF units in this period. There were 2,715 births after assisted conception in Australia in 1994, accounting for 1.0% of all births. In New Zealand, there were 160 births after assisted conception in 1994.
- After transfer of fresh embryos to the uterus, the live-birth pregnancy rates were 10.2 per 100 oocyte retrieval cycles in 1994 and 11.5 per 100 cycles in 1995. After GIFT, the live-birth pregnancy rates were 20.7 and 20.6 per 100 oocyte retrieval cycles in 1994 and 1995, respectively. After embryo freezing, the live-birth pregnancy rates were 10.9 and 11.1 per 100 embryo transfer cycles in 1994 and 1995, respectively.
- There was a marked increase in treatment cycles in which intracytoplasmic sperm injection (ICSI), and occasionally other types of microinsemination, were attempted. Oocyte retrieval cycles for microinsemination increased from 1,243 in 1993 to 2,786 in 1994 and 4,261 in 1995. With an additional 929 embryo transfer cycles in 1994 after microinsemination and embryo freezing, and 1,794 transfer cycles in 1995, microinsemination accounted for 19.7% of all assisted conception cycles in 1994 and for 30.0% in 1995.
- The live-birth pregnancy rates for microinsemination and transfer of fresh embryos were 10.9 per 100 oocyte retrieval cycles in 1994 and 13.1 per 100 cycles in 1995. For cycles after microinsemination and embryo freezing, the live-birth pregnancy rates were 13.3 per 100 embryo transfer cycles in 1994 and 11.6 per 100 cycles in 1995.
- After oocyte donation and IVF, the live-birth pregnancy rates were 9.5 per 100 embryo transfer cycles in 1994 and 14.8 per 100 cycles in 1995.
- More than 3 embryos were transferred to the uterus in 2.4% of IVF cycles in 1994 and 1.9% of cycles in 1995 but, for GIFT, more than 3 oocytes were transferred in 4.7% of cycles in 1994 and 5.6% of cycles in 1995.
- In IVF pregnancies, twins declined from 15.7% in 1993 to 15.1% in 1994, triplets occurred in 1.5% in 1993 and 1.6% in 1994, and there was 1 quadruplet pregnancy in each year. In GIFT pregnancies, twins increased from 21.7% in 1993 to 22.3% in 1994; triplets increased from 2.5% in 1993 to 3.9% in 1994; and there were 2 quadruplet pregnancies in 1994.
- In 1994, 46 (56.8%) of 81 perinatal deaths after IVF, and 33 (75.0%) of 44 perinatal deaths after GIFT, occurred in multiple births.
- Among 793 IVF pregnancies after microinsemination between 1990 and 1994, live births occurred in 76.2%, spontaneous abortion in 19.7%, and ectopic pregnancy in 2.3%. Twins occurred in 14.7% of viable pregnancies, triplets in 1.5%, and there was one quadruplet pregnancy. Among 724 births, the perinatal death rate was 33.1 per 1,000 births; for singleton births, it was 19.5 per 1,000 births, for twins, 61.5 per 1,000 births, and for triplets, 111.1 per 1,000 births. Congenital malformations were reported in 26 (3.6%) fetuses and infants.

# 1 Introduction

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This report contains a summary of the results of treatment of infertility by assisted conception in all units in Australia and New Zealand in 1994 and 1995. It includes data on in-vitro fertilisation (IVF), gamete intrafallopian transfer (GIFT), and the newer techniques of microinsemination that are used to treat male infertility, but excludes other treatment of infertility by artificial insemination or by ovulation induction without IVF or GIFT. In Australia, there were 23 IVF or GIFT units in 1994 and 24 in 1995. In New Zealand, there were 5 units. Some IVF units have set up satellite clinics that are linked to major IVF centres in capital cities.

The IVF units reported summary data on treatment cycles and also notified each pregnancy on a standard form (Appendix 2). The data included the number of cycles commenced in 1994 and 1995 and the number progressing to the stages of oocyte retrieval, embryo transfer, clinical pregnancy, and live births in 1994, or viable pregnancies of at least 20 weeks' gestation in 1995. Each IVF unit reported separate results for IVF and uterine transfer of fresh embryos, IVF and tubal transfer of fresh embryos, IVF and transfer of frozen/thawed embryos, donor oocytes, various techniques of microinsemination and GIFT. The tables on treatment cycles are mutually exclusive and so differ slightly from the presentation of IVF results in reports for the years prior to 1991. Each IVF unit was also requested to provide tabulated data on the age distribution, causes of infertility, drugs used to stimulate ovulation, and the number of embryos or oocytes transferred for women treated by IVF and uterine transfer, IVF and tubal transfer, and GIFT. Tabulated summaries of results and computer printouts of notified pregnancies were returned to each unit to check their accuracy and completeness.

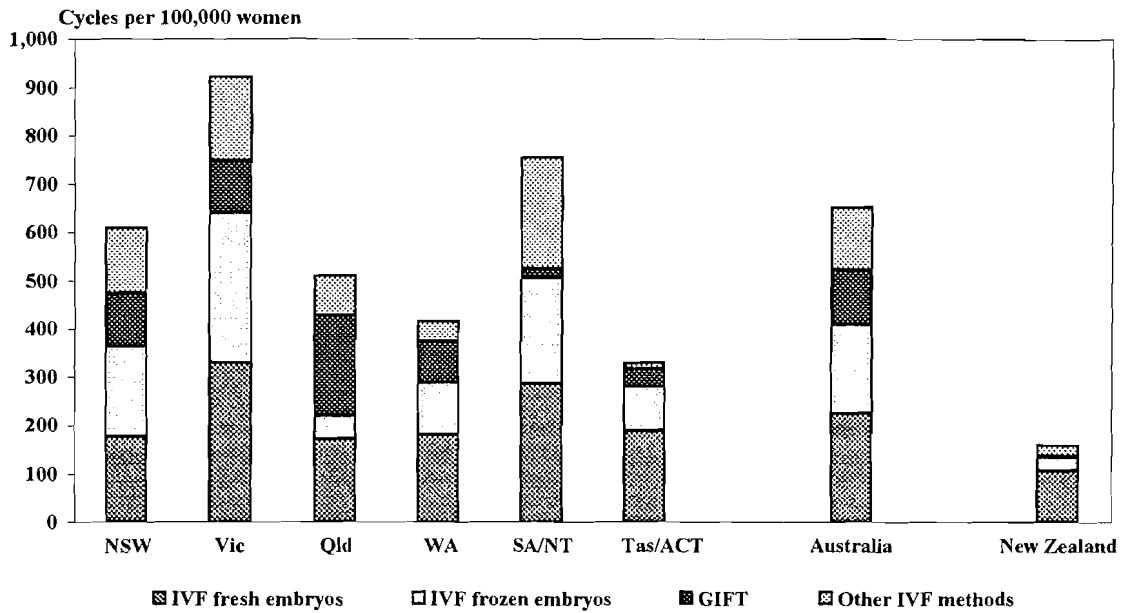
All analyses of treatment cycles and pregnancy outcome in this report are based on the year of treatment and conception. Data on pregnancy outcome are given for 1994 and include births up to September 1995. Each IVF unit is designated by an alphabetical letter which may differ from that given for the unit in previous reports. As the relative size of IVF units (based on the total number of treatment cycles) may vary from year to year, in this report an IVF unit may be designated by different letters for 1994 and 1995.

## Variations in use of assisted conception

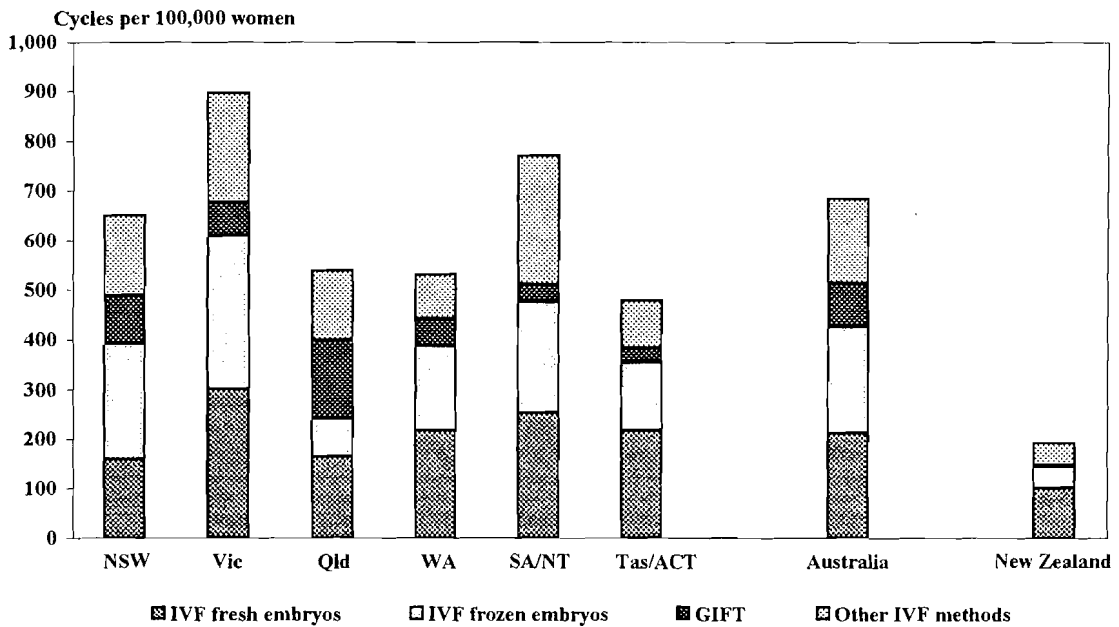
The use of assisted conception to treat infertility can be compared in different populations by relating the number of treatment cycles during a year to the number of women in the reproductive age group. The total number of treatment cycles can be estimated by adding those that reach the stage of oocyte retrieval for IVF and GIFT to the number of transfer cycles for frozen/thawed embryos and donor oocytes. As most women treated by assisted conception are aged between 25 and 44 years, the ratio of the number of treatment cycles is expressed per 100,000 women aged 25-44 years. In the figures for 1994 and 1995, South Australia and the Northern Territory are reported together because the only IVF clinic in Darwin is a satellite clinic of the Queen Elizabeth Hospital in Adelaide. Also, the figures for Tasmania and the Australian Capital Territory are combined because each region has a single IVF unit.

There were considerable variations in treatment ratios among the Australian States, and marked differences between Australia and New Zealand (Table 1, Figures 1 and 2). In 1994 and 1995, the treatment ratios in Australia were 652 and 685 cycles per 100,000 women, respectively. These ratios were 3 to 4 times higher than in New Zealand which had ratios of 160 and 195 per 100,000 women, respectively. In Australia, the highest treatment ratios were in Victoria and South Australia and the lowest ratios were in Tasmania and the Australian Capital Territory. As these ratios are based on the States in which the IVF units are located, comparisons between States may be slightly affected by interstate movements of infertile women for treatment. In Victoria and South Australia, there were relatively more treatment cycles for all types of IVF (fresh embryos, frozen embryos and intracytoplasmic sperm injection) than in the other States or New Zealand. In Queensland, GIFT was more likely to be used than elsewhere.

**Figure 1: Ratio of treatment cycles to number of women in reproductive age group, 1994**



**Figure 2: Ratio of treatment cycles to number of women in reproductive age group, 1995**



## **2 Treatment cycles and pregnancy rates**

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As in previous reports, clinical pregnancies and those pregnancies resulting in one or more live births are expressed as rates per 100 treatment cycles that reach the stage of oocyte retrieval. In treatment cycles in which embryos were transferred after embryo freezing or oocyte donation, pregnancy rates are expressed per 100 embryo transfer cycles.

Between 1991 and 1993, the total number of treatment cycles for all types of assisted conception increased each year from 16,809 in 1991 to 17,874 in 1992 and 18,765 in 1993. There were further increases of 10.3% to 20,706 cycles in 1994, and then of 7.7% to 22,303 cycles in 1995. Between 1993 and 1994, the number of stimulated cycles either for IVF without subsequent microinsemination or for GIFT actually declined by 1.8% from 12,512 in 1993 to 12,291 in 1994, followed by a further decline of 7.1% to 11,417 cycles in 1995.

By contrast, following the trend of recent years, the use of microinsemination to treat mainly male infertility continued to increase in 1994 and 1995. There were 337 oocyte retrieval cycles for these techniques in 1990, 393 in 1991, 812 in 1992, and 1,243 in 1993, then the number more than doubled to 2,786 cycles in 1994 and increased by another 52.9% to 4,261 cycles in 1995. All but 214 cycles in 1994, and 33 cycles in 1995, involved intracytoplasmic sperm injection (ICSI), which has replaced subzonal insemination as the preferred technique. Microinsemination with transfer of fresh or frozen embryos accounted for 19.7% of all types of assisted conception in 1994, and for 30.0% in 1995.

Transfer cycles after embryo freezing increased by 13.7% between 1993 and 1994 and by another 18.3% between 1994 and 1995. In collecting the data for 1993, no distinction was made as to whether or not microinsemination had preceded embryo freezing. Between 1994 and 1995, embryo transfer cycles without prior microinsemination increased by 2.2% from 4,309 to 4,404, whereas transfer cycles after both microinsemination and embryo freezing almost doubled from 929 in 1994 to 1,794 in 1995.

These figures indicate that most of the increase in the total number of treatment cycles for all types of assisted conception in recent years has been due to greater use of microinsemination techniques.

### **2.1 IVF and GIFT treatment cycles and pregnancy rates in 1994**

Most IVF units provided summary data on the age of treated women, causes of infertility, drugs used for ovarian stimulation, and the number of embryos or oocytes transferred for treatment cycles which progressed to this stage of treatment. Separate data were given for three groups - IVF with transfer of embryos to the uterus, IVF with transfer to the fallopian tubes, and GIFT (Tables 2 and 3). Women treated by IVF with uterine transfer were slightly older and were more likely to have tubal causes of infertility. Infertility due to male factors was the most likely cause among women treated by IVF and tubal transfer and unexplained infertility was more likely among those treated by GIFT. Gonadotrophin-releasing hormone analogues (GnRHa) combined with gonadotrophins were used to stimulate ovulation in the majority of treatment cycles for all three groups of women. More than three embryos were transferred in 2.4% of uterine IVF cycles, in 3.8% of tubal IVF cycles, and in 4.7% of GIFT cycles in 1994.

In 1994, 8,098 treatment cycles were commenced for IVF with a view to subsequent transfer of fresh embryos to the uterus (Table 4). Oocyte retrieval was attempted in 6,795 cycles and embryos were transferred in 5,524 cycles. There were 944 clinical pregnancies (13.9 per 100 oocyte retrieval cycles) and 690 pregnancies with live births (10.2 per 100 oocyte retrieval cycles). There were marked variations in pregnancy rates among the individual IVF units. This may be partly attributable to differences in selection criteria, methods of treatment, and the characteristics of infertile couples, or to random fluctuations due to the relatively small number of treatment cycles in some IVF units.

An additional 540 treatment cycles were commenced for tubal transfer of embryos after IVF. These resulted in 81 clinical pregnancies (16.1 per 100 oocyte retrieval cycles) and 63 pregnancies with live births (12.5 per 100 oocyte retrieval cycles).

In 1994, 22 of the 28 IVF units in Australia and New Zealand used microinsemination techniques to treat infertility. Intracytoplasmic sperm injection was the main type of microinsemination; only 3 of the units were still using subzonal insemination. Oocyte retrieval was attempted in 2,786 cycles and embryos were transferred in 2,436 cycles (Table 5), resulting in 430 clinical pregnancies (15.4 per 100 oocyte retrieval cycles) and 303 pregnancies with live births (10.9 per 100 oocyte retrieval cycles).

Data for transfer cycles after embryo freezing are given for conventional IVF (Table 6) and for microinsemination (Table 7). There were 4,309 embryo transfer cycles in the first group and 929 in the second group. The total of 5,238 transfer cycles in 1994 exceeded the total of 4,607 in 1993. After conventional IVF and embryo freezing, there were 657 clinical pregnancies (15.2 per 100 embryo transfer cycles) and 469 pregnancies with live births (10.9 per 100 embryo transfer cycles). After microinsemination and embryo freezing, the clinical and live-birth pregnancy rates were 16.6 and 13.3 per 100 embryo transfer cycles, respectively.

The 391 embryo transfer cycles after use of donor oocytes (Table 8) resulted in 56 clinical pregnancies (14.3 per 100 embryo transfer cycles) and 37 pregnancies with live births (9.5 per 100 embryo transfer cycles).

There were 3,653 treatment cycles commenced for GIFT in 1994 (Table 9), resulting in 873 clinical pregnancies (27.6 per 100 oocyte retrieval cycles) and 655 pregnancies with live births (20.7 per 100 oocyte retrieval cycles).

The number of women who have their embryos frozen to avoid the necessity for repeated ovarian stimulation in every treatment cycle increases each year, leading to considerable increases in the number of frozen embryos (Table 10). In 1994, the average number of embryos frozen was 4.4 per patient, while the average number of frozen embryos transferred after thawing was 2.6 per patient. Some thawed embryos (26.4%) were unsuitable for transfer. More than 20,000 frozen embryos were in storage at the end of 1994. Comparison of results between IVF units enables review of policies for storage of frozen embryos.

## **2.2 IVF and GIFT treatment cycles and pregnancy rates in 1995**

There were relatively more older women among those treated by assisted conception in 1995, continuing the trend of recent years. The proportion aged 35 years and over was 47.7% for IVF with uterine transfer of embryos, 46.8% for IVF with tubal transfer, and 41.9% for GIFT (Table 11). The causes of infertility and the drugs used to stimulate ovulation generally showed a pattern similar to that in 1994.

In 1995, more than three embryos were transferred in 1.9% of uterine IVF cycles, in 2.0% of tubal IVF cycles, and in 5.6% of GIFT cycles (Table 12).

When summary data on treatment cycles and pregnancies for 1995 were reported to the NPSU, the final outcome of all pregnancies conceived in that year was not known. The pregnancy rates for 1995 are therefore based on viable pregnancies of at least 20 weeks' gestation, not pregnancies with live births. As only 1% of viable pregnancies result in stillbirths, viable pregnancy rates are marginally higher than live-birth pregnancy rates.

Of the 8,191 treatment cycles commenced for IVF and uterine transfer of fresh embryos, 6,491 cycles progressed to attempted oocyte retrieval, and 5,295 to embryo transfer (Table 13). There were 944 clinical pregnancies (14.5 per 100 oocyte retrieval cycles) and 747 viable pregnancies (11.5 per 100 oocyte retrieval cycles).



Another 382 treatment cycles were commenced for IVF and tubal transfer. These resulted in 46 clinical pregnancies (13.5 per 100 oocyte retrieval cycles) and 36 viable pregnancies (10.5 per 100 oocyte retrieval cycles).

Intracytoplasmic sperm injection (ICSI) was used in 26 of the 29 IVF units in Australia and New Zealand in 1995. All but 33 of the 4,261 oocyte retrieval cycles for microinsemination involved attempts at ICSI (Table 14). Embryos were transferred in 3,778 cycles, resulting in 698 clinical pregnancies (16.4 per 100 oocyte retrieval cycles) and 560 viable pregnancies (13.1 per 100 oocyte retrieval cycles).

As for 1994, the data for 1995 on transfer cycles after embryo freezing are separated into two groups, IVF without and with microinsemination. There were 4,404 embryo transfer cycles in the group without microinsemination, resulting in 637 clinical pregnancies (14.5 per 100 embryo transfer cycles) and 487 viable pregnancies (11.1 per 100 embryo transfer cycles) (Table 15). The pregnancy rates after both microinsemination and embryo freezing were quite similar to those in the first group - 14.6 and 11.6 per 100 embryo transfer cycles, respectively (Table 16).

In 1995, there were 86 clinical pregnancies (19.5 per 100 embryo transfer cycles) and 65 viable pregnancies (14.8 per 100 embryo transfer cycles) that resulted from the 427 transfer cycles after use of donor oocytes (Table 17).

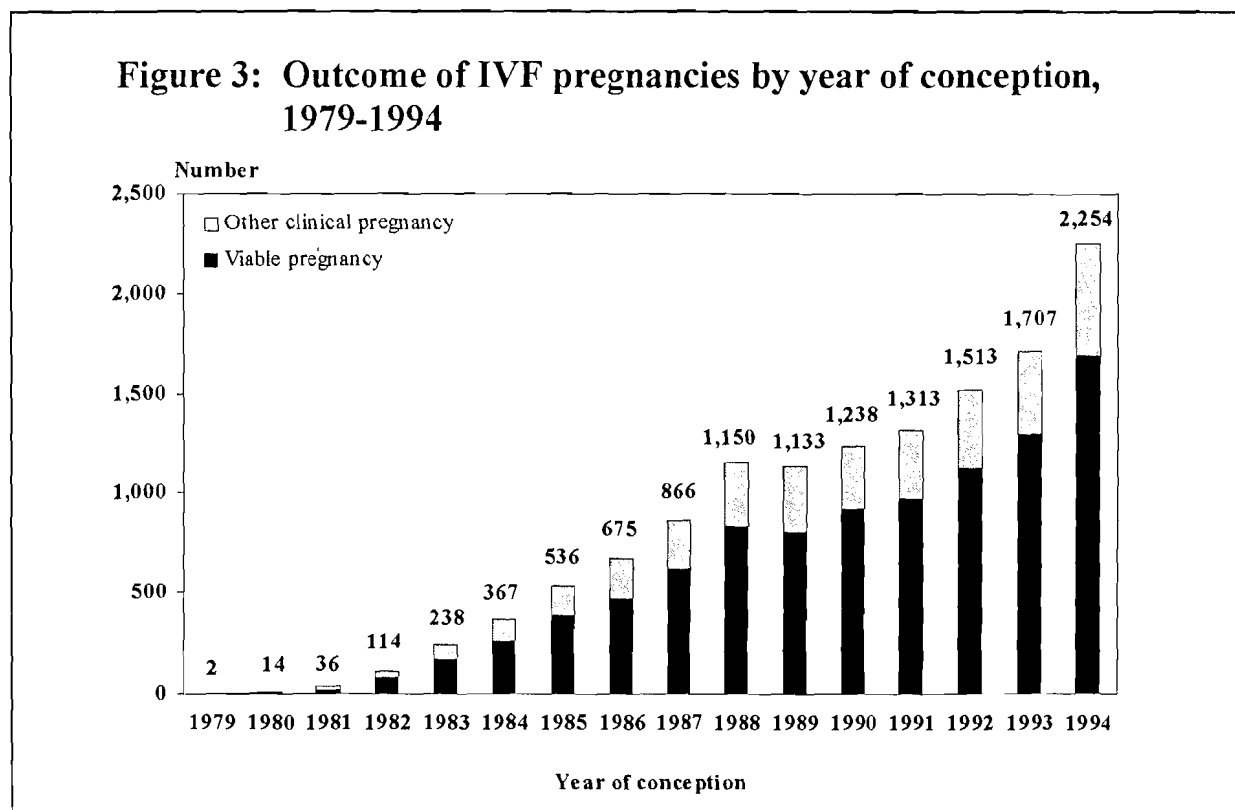
Fewer GIFT cycles were commenced in 1995 than in 1994, but the pregnancy rates were almost identical in the two years. In 1995, the clinical and viable pregnancy rates were 27.1 and 20.6 per 100 oocyte retrieval cycles, respectively (Table 18).

Almost 5,000 women had more than 22,000 embryos frozen in 1995 (Table 19), an average of 4.6 embryos for each woman and higher than the average of 4.4 in 1994. An average of 2.6 frozen embryos per woman were transferred after thawing in 1995, the same as in 1994. The increase in the number of women having their embryos frozen, and the relative excess of frozen embryos over thawed embryos, contributed to the further increase of frozen embryos in storage.

### 3 IVF pregnancies

This section contains data on all pregnancies other than those resulting from GIFT; it therefore includes pregnancies occurring after transfer of fresh embryos to the uterus or fallopian tubes, transfer of frozen/thawed embryos, use of donor oocytes, and use of various methods of microinsemination.

There were 2,254 clinical pregnancies after IVF in 1994 (Table 20, Figure 3), more than in any previous year and an increase of 547 (32.0%) above the number in 1993. Live birth was the outcome in 73.6% of the pregnancies in 1994.



#### 3.1 Maternal and paternal characteristics

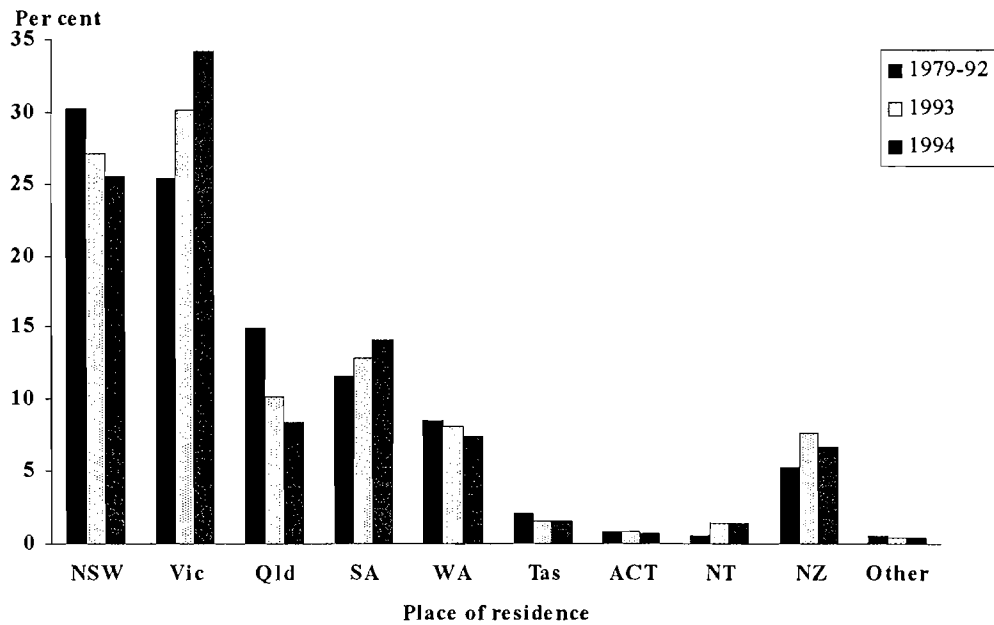
##### 3.1.1 Place of residence

Compared to 1993, there was an increase in the number of IVF pregnancies in all Australian States and New Zealand in 1994 but a relatively greater proportion of pregnancies were to couples living in Victoria and South Australia (Table 21, Figure 4).

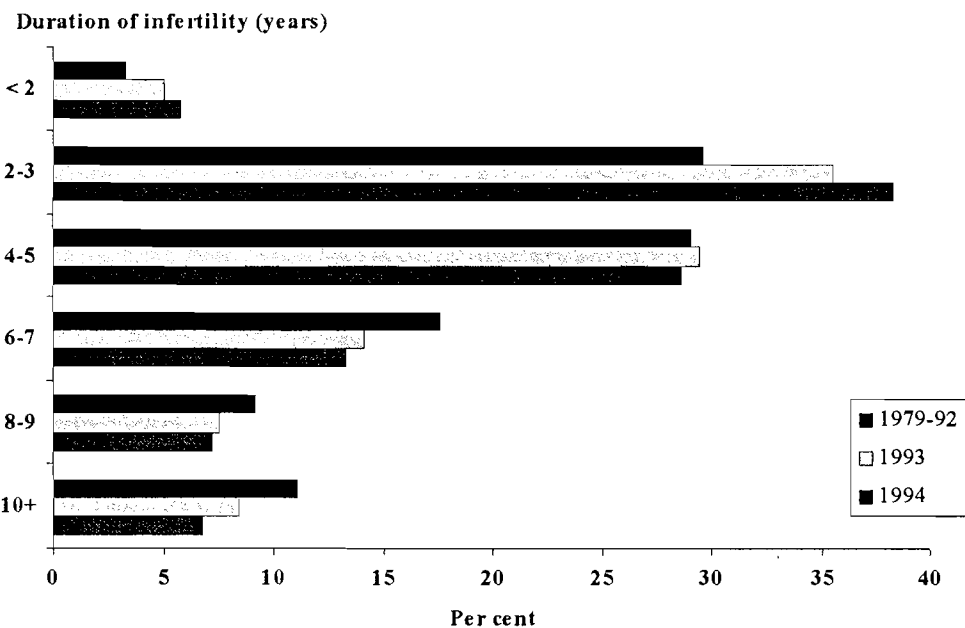
##### 3.1.2 Parental age

The majority (77.4%) of women conceiving by IVF in 1994 were in their 30s or 40s (Table 22). The proportion of women aged 35 years and over was 34.3%, considerably higher than the proportion of 12.6% for all mothers giving birth in Australia. Fathers aged 35 years and over increased from 49.4% in 1993 to 52.5% in 1994; the increase was most pronounced for men aged 45 years and over (Table 23).

**Figure 4: Place of parental residence, IVF pregnancies, 1979-1994**



**Figure 5: Duration of infertility, IVF pregnancies, 1979-1994**



### 3.1.3 Previous pregnancies

Women who conceived in 1994 had similar previous reproductive experiences to those who conceived in earlier years, but there was a slight increase in the proportion of women who had not been pregnant previously (Table 24).

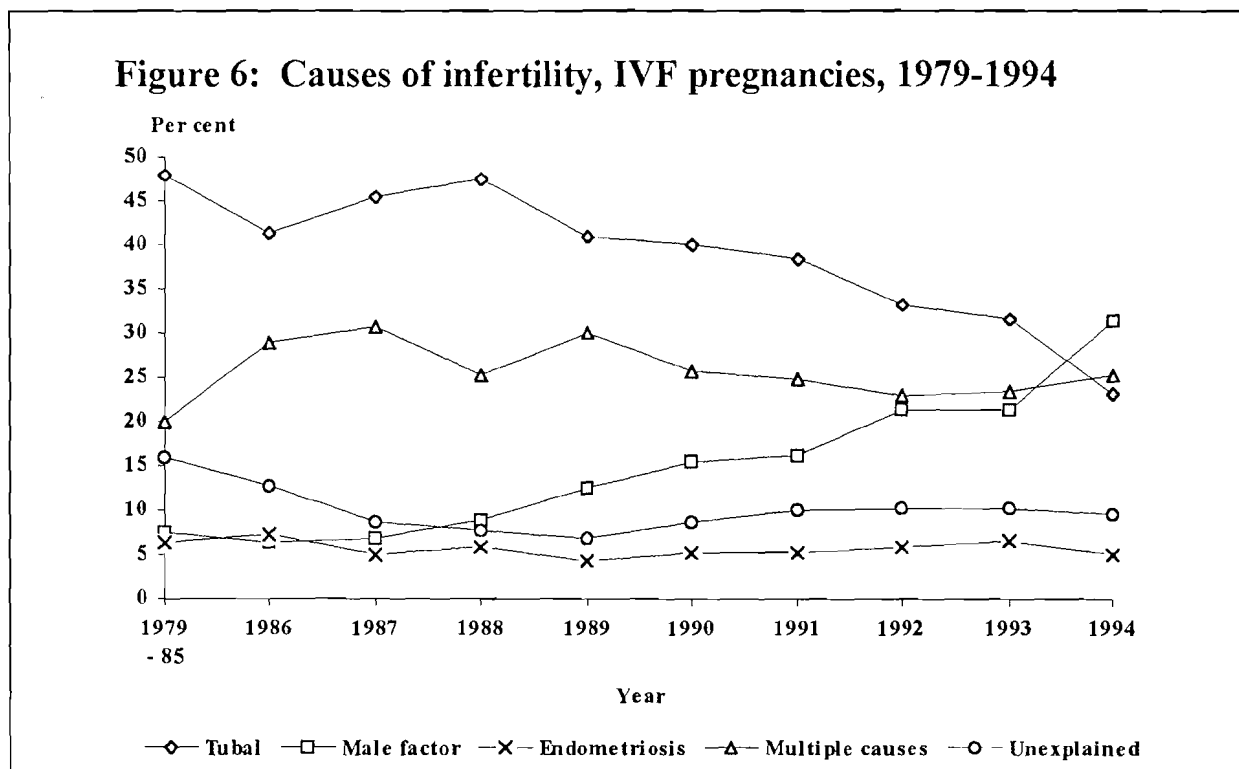
### 3.1.4 Duration of infertility

There were relatively more women with shorter periods of infertility in 1994 than in previous years (Table 25, Figure 5). The proportion of women infertile for a period of less than four years increased from 32.9% in 1979-1992, to 40.5% in 1993 and 44.0% in 1994. Women who had been infertile for 8 years or more were less likely to achieve a live birth than those who had been infertile for shorter periods (Table 26).

### 3.1.5 Causes of infertility

Women conceiving after IVF in 1994 were more likely to have infertility due to male factors than in previous years (12.7% in 1979-1992, 21.3% in 1993, and 31.3% in 1994) and were less likely to have tubal causes (41.4% in 1979-1992, 31.5% in 1993, and 23.3% in 1994) (Table 27, Figure 6). All other causes of infertility have remained fairly constant over this period.

The proportion of pregnancies resulting in live births was highest for male infertility (77.7%) and lowest for multiple causes of infertility (70.7%) (Table 28). Spontaneous abortion was highest for multiple causes of infertility (23.3%) and lowest for male infertility (18.7%). Ectopic pregnancy was more likely among women treated for tubal causes of infertility (5.2%) than for other causes. Stillbirth was more likely among women treated for multiple causes of infertility (2.3%) than for other causes, but the number of stillbirths in each group was relatively small.

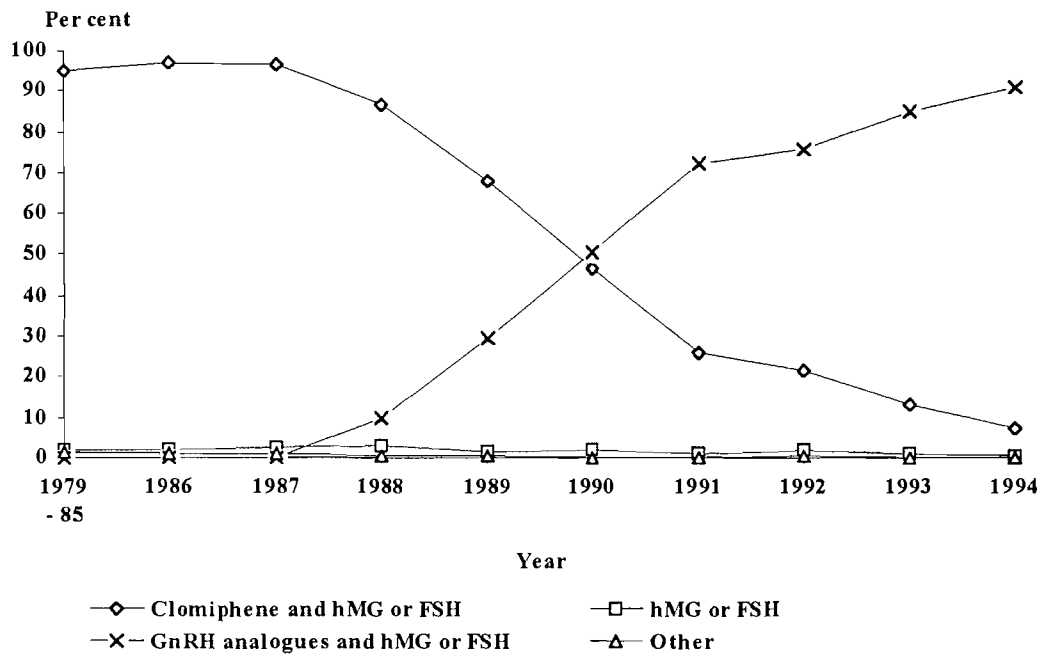


## 3.2 Management of IVF pregnancies

### 3.2.1 Ovarian stimulation

Continuing the trend of recent years, gonadotrophin-releasing hormone analogues (GnRHa) combined with gonadotrophins were the main drugs used for stimulating ovulation. In 1994, these drugs were used in 91.4% of treatment cycles that resulted in IVF pregnancies (Table 29, Figure 7). In recent years the use of clomiphene to stimulate ovulation has declined from over 90% of treatment cycles in the mid-1980s to only 7.6% of treatment cycles in 1994.

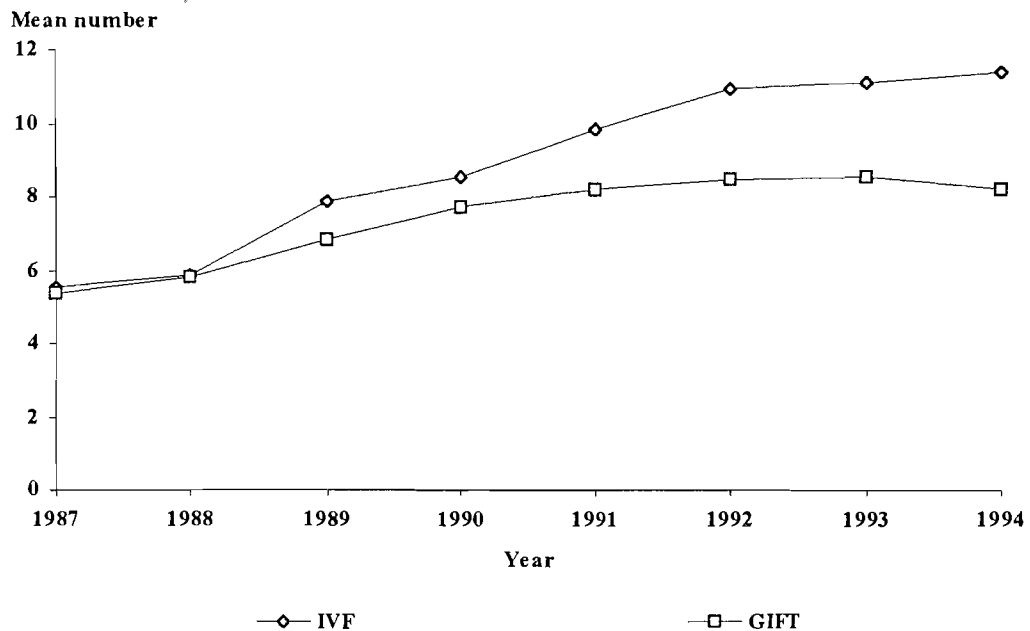
**Figure 7: Drugs used to stimulate ovulation, IVF pregnancies, 1979-1994**



**3.2.2 Treatment cycle in which pregnancy occurred**

Over 40% of IVF pregnancies occurred in the first treatment cycle in 1994 and two-thirds of all IVF pregnancies occurred in the first or second treatment cycle, similar to the proportion in previous years (Table 30).

**Figure 8: Mean number of oocytes collected by laparoscopy or ultrasound guidance, IVF and GIFT pregnancies, 1987-1994**



### **3.2.3 Number of oocytes collected**

The average number of oocytes collected by laparoscopy or ultrasound guidance for IVF has continued to increase (Table 31, Figure 8). In 1994, 8 or more oocytes were collected in over two-thirds of all treatment cycles and the mean number of oocytes collected was 11.4 per cycle.

### **3.2.4 Number of embryos transferred**

There has been a continuing decline in the proportion of IVF pregnancies that resulted from transfer of 4 or more embryos (Figure 9). In 1994, only 1.3% of pregnancies followed transfer of 4 or more embryos (Table 32). More than half of the pregnancies followed transfer of 1 or 2 embryos. An average of 2.4 embryos were transferred in 1994, the same as in 1993 but less than in previous years (Figure 10).

IVF pregnancies resulting from transfer of more than 3 embryos in 1994 were more likely to have spontaneous abortion or ectopic pregnancy as an outcome than pregnancies occurring after transfer of fewer embryos (Table 33).

### **3.2.5 Donor or frozen gametes and embryos**

The number of IVF pregnancies that followed transfer of frozen/thawed embryos has continued to increase from 530 in 1992 to 603 in 1993 and 786 in 1994 (Table 34). The number of pregnancies after use of donor sperm or donor oocytes has shown little change. The outcome of pregnancies after donor sperm or donor oocytes was similar to that of all IVF pregnancies (Table 35).

### **3.2.6 Microinsemination**

IVF pregnancies after microinsemination increased markedly from 107 in 1990-1992 to 136 in 1993 and 550 in 1994 (Table 36). There were relatively more live births and fewer ectopic pregnancies after microinsemination than among all IVF pregnancies.

### **3.2.7 Drugs used in luteal phase of pregnancy**

Nearly 80% of women who became pregnant in 1994 were treated with drugs during the luteal phase (Table 37). Human chorionic gonadotrophin (hCG) and progestagen were the most commonly used drugs.

## **3.3. Outcome of pregnancy**

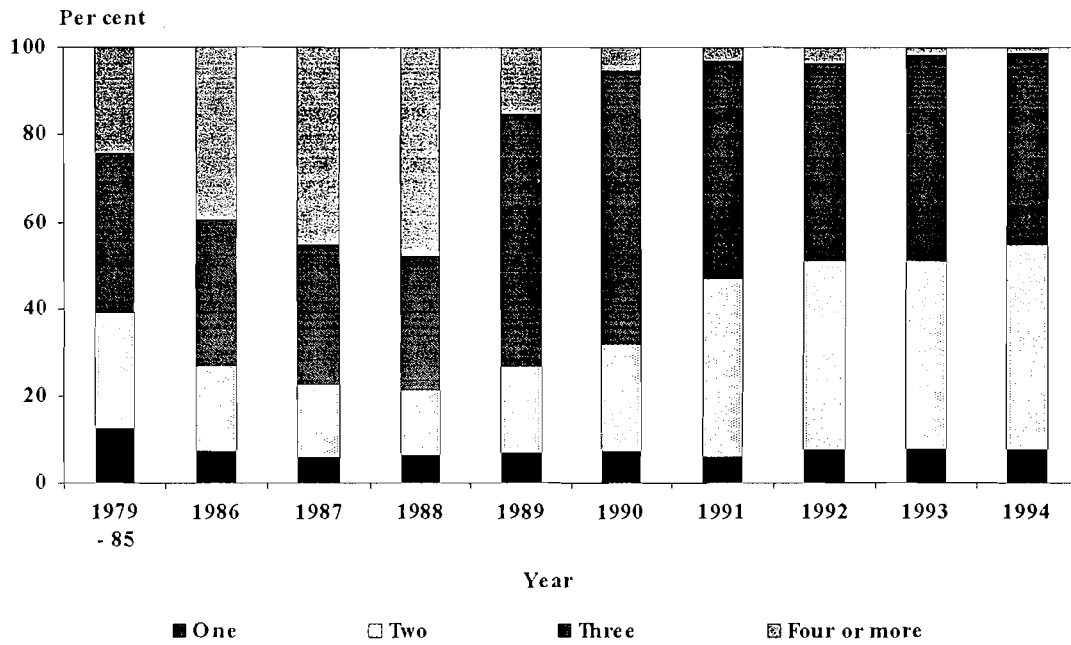
### **3.3.1 Maternal deaths**

No maternal deaths were recorded for women who conceived by IVF in 1994. There have been two maternal deaths reported in IVF pregnancies among a total of 13,156 pregnancies.

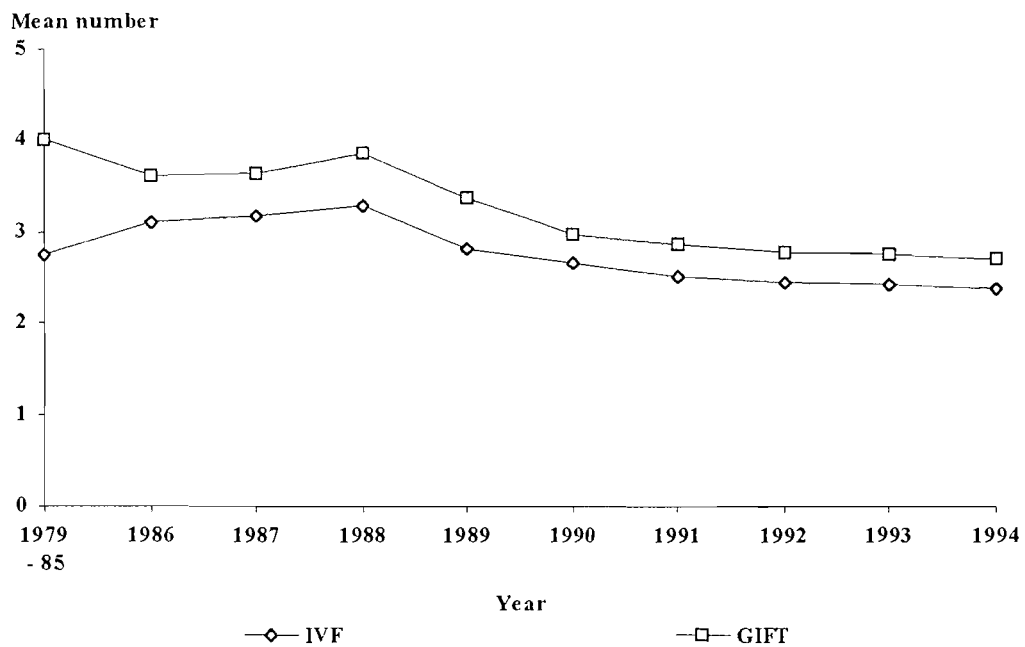
### **3.3.2 Maternal age and outcome of pregnancy**

The proportion of women who achieve a live birth after conceiving by IVF decreases with advancing maternal age. About three-quarters of women aged less than 35 years gave birth to liveborn infants compared with 68.4% among women aged 35 to 39 years and 54.4% among women aged 40 years and over (Table 38). Spontaneous abortion and termination of pregnancy were more likely among women of 40 years and over.

**Figure 9: Percentage distribution of number of embryos transferred, IVF pregnancies, 1979-1994**



**Figure 10: Mean number of embryos/oocytes transferred, IVF and GIFT pregnancies, 1979-1994**



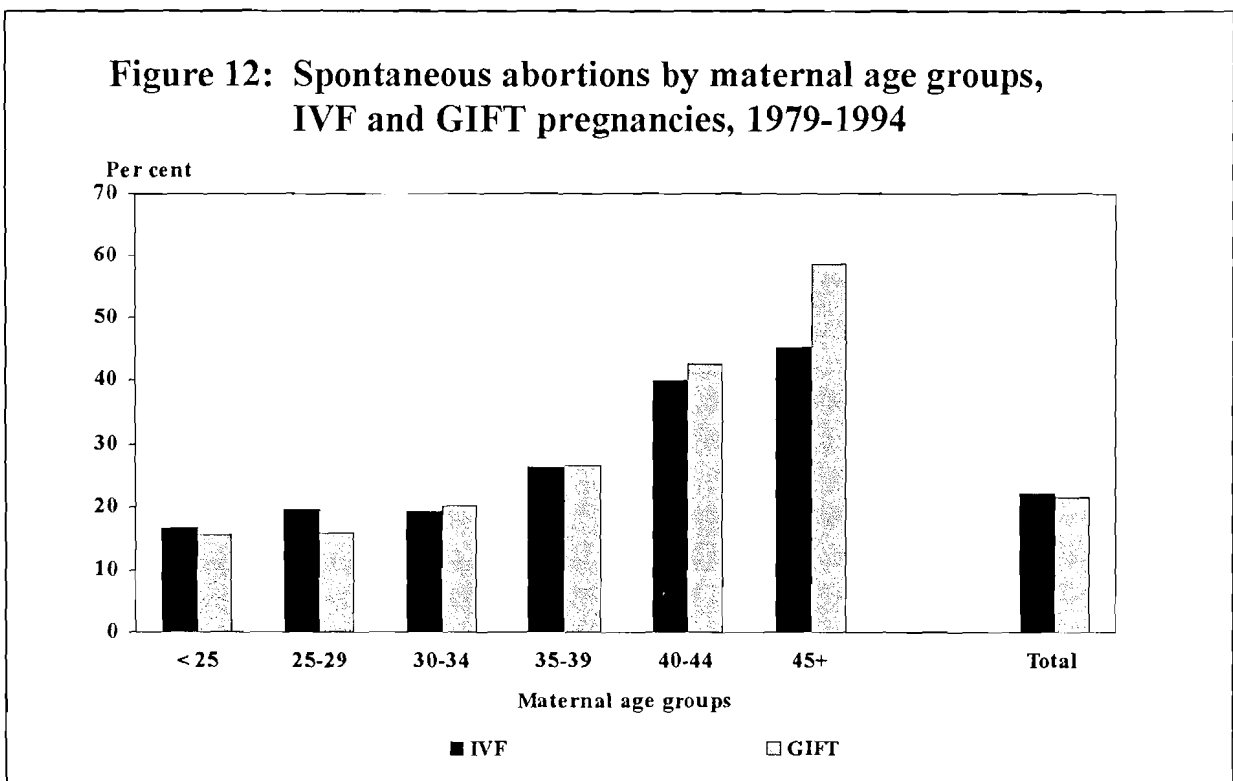
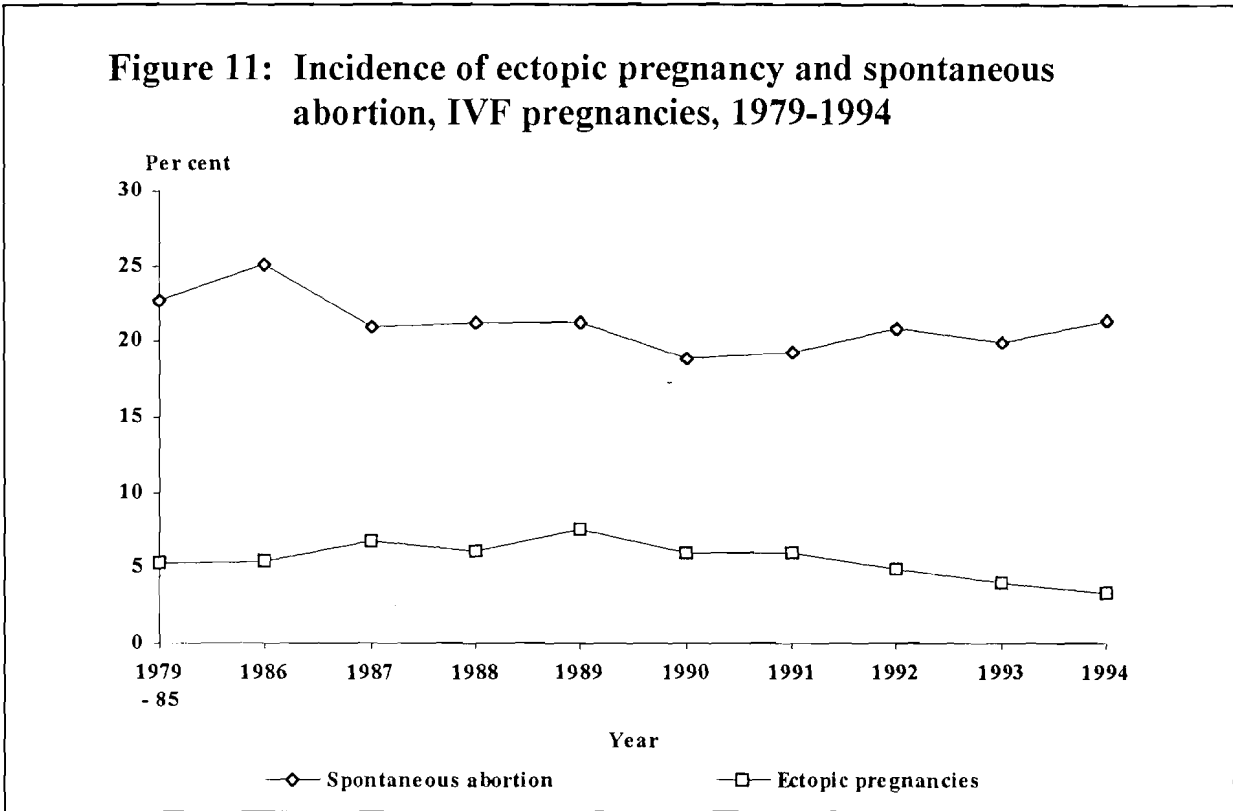
### 3.3.3 Spontaneous abortion

There has been little change in the rate of spontaneous abortion in IVF pregnancies in recent years (Table 39, Figure 11). Spontaneous abortion was more likely for older women, increasing from 16.7% for women less than 25 years to 45.7% for women 45 years and over, but only 0.3% of women were in

this oldest age group (Table 40, Figure 12). Among 793 pregnancies conceived after microinsemination in 1990-1994, there were 156 (19.7%) spontaneous abortions (Table 36).

### 3.3.4 Ectopic pregnancy

The proportion of ectopic pregnancies declined from 4.9% in 1992 to 3.9% in 1993 and 3.4% in 1994 (Table 41, Figure 11). This declining trend is partly attributable to relatively fewer ectopic pregnancies among the increasing proportion of women whose infertility was due to male factors.





### 3.3.5 Selective reduction of fetuses

Selective reduction of fetuses may be performed in early pregnancy to abort a severely malformed fetus in a multiple pregnancy or to avoid multiple births. There were 10 IVF but no GIFT pregnancies notified after selective reduction of pregnancies conceived in 1994. Fetal reduction had previously been performed in 2 pregnancies in 1988, 1 in 1989, 1 in 1990, 9 in 1991, 6 in 1992 and 6 in 1993. In 1994, 3 fetuses were reduced to 2 in 4 pregnancies, 3 fetuses were reduced to 1 in 2 pregnancies, and 2 fetuses were reduced to 1 in 4 pregnancies. The indication for fetal reduction was a congenital malformation in 3 pregnancies: abdominal wall defect in one pregnancy reduced from 2 fetuses to 1, Dandy Walker malformation in another pregnancy reduced from 2 fetuses to 1, and spina bifida in a pregnancy reduced from 3 fetuses to 1. There were no spontaneous abortions of remaining fetuses in these 10 pregnancies.

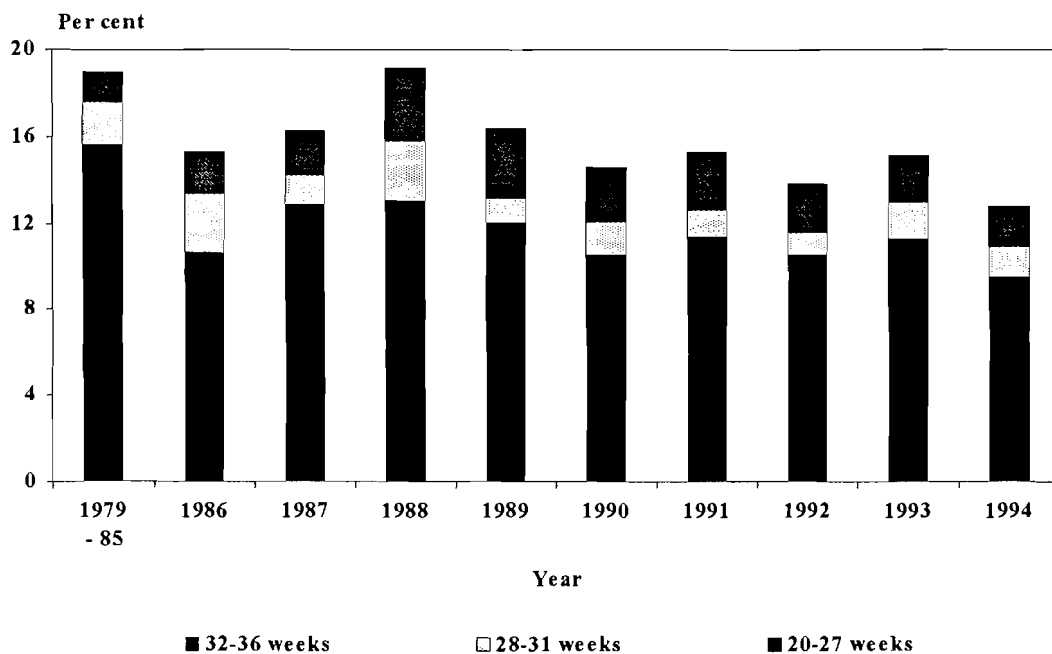
### 3.3.6 Complications of pregnancy

Significant complications of pregnancy are recorded in tick boxes on the forms used to notify information about the women conceiving by assisted conception and their pregnancies. No information was given for the data item on complications in 1,921 (23.9%) of the 8,025 pregnancies conceived after IVF in the period from 1990 to 1994. Among the other 6,104 pregnancies for which information was recorded, threatened abortion was reported in 6.0%, placenta praevia in 1.2%, antepartum haemorrhage in 1.6% and pregnancy-induced hypertension in 6.4% (Table 42). Other complications such as maternal medical conditions, fetal growth restriction and premature labour were reported in 19.6% of IVF pregnancies. Any comparison of these reported complications between IVF and other pregnancies should take account of how the information is collected and also the incomplete recording of this data item.

### 3.3.7 Viable pregnancies of at least 20 weeks' gestation

Reflecting the overall increase in the number of IVF pregnancies conceived in 1994, there was a considerable increase in births. In Australia, there were 1,850 births after IVF in 1994 compared with 1,420 infants conceived in 1993 and 1,237 conceived in 1992. In New Zealand, the numbers of infants were 153 for 1994 conceptions, 116 for 1993, and 99 for 1992.

**Figure 13: Incidence of preterm birth in singleton IVF pregnancies, 1979-1994**



Preterm births of less than 37 weeks' gestation occurred in 20.9% of all IVF pregnancies in 1994 (Table 43), less than in recent years. The incidence of preterm births was higher with increasing plurality, ranging from 12.8% for singleton IVF pregnancies to 55.9% for twin pregnancies and 100.0% for triplet pregnancies. Preterm births among singleton IVF pregnancies declined to their lowest level in 1994 (Figure 13), but the rate of 12.8% was double that of 6.4% for all Australian pregnancies in 1993.

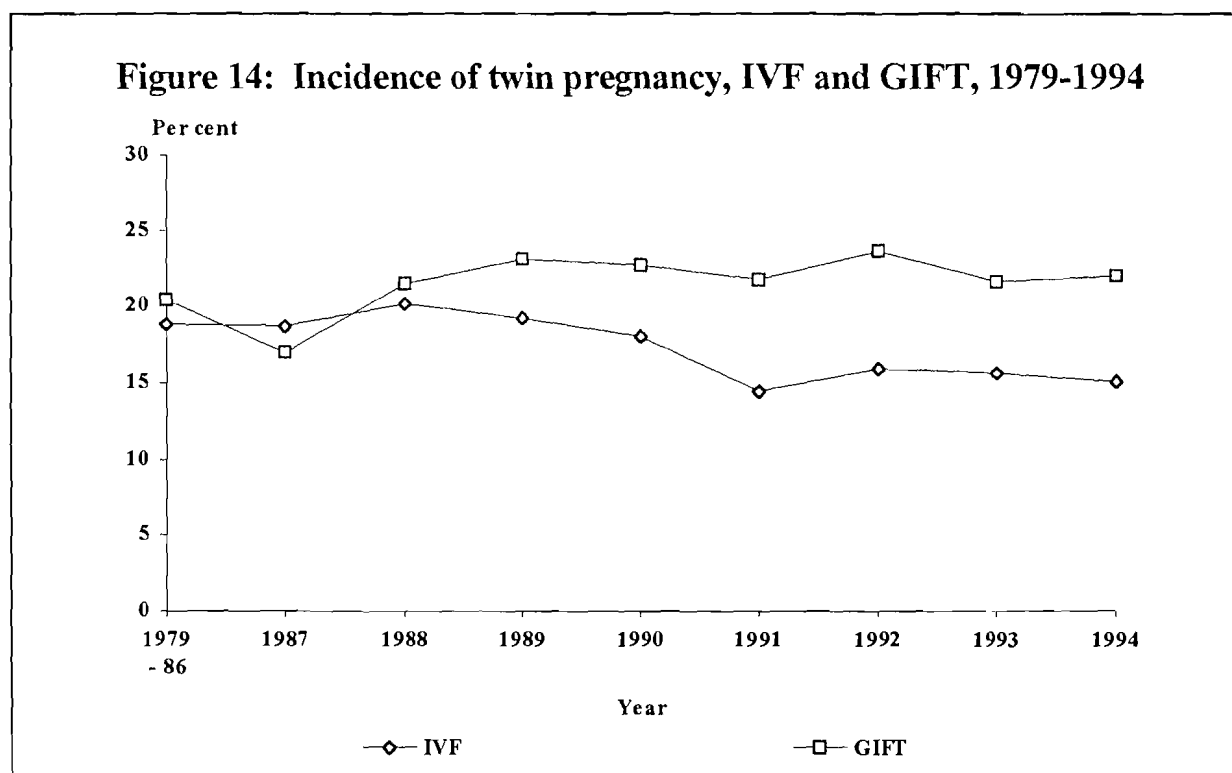
After microinsemination, the incidence of preterm pregnancies in 1990-1994 was 18.4% for all pregnancies, 11.9% for singleton pregnancies and 46.7% for twin pregnancies (Table 44), slightly less than that for all IVF pregnancies.

In 1994, preterm births occurred in 16.6% of 92 singleton IVF births after use of donor sperm, in 14.3% of 35 births after use of donor oocytes, and in 13.8% of 528 births after use of frozen embryos (Table 45).

As in previous years, there was a high proportion of preterm births among singleton IVF pregnancies in all maternal age groups (Table 46) and for all causes of infertility (Table 47). The proportion increased with advancing maternal age from 10.0% for mothers aged less than 25 years to 19.2% for those aged 40 and over. Preterm birth was less likely if infertility was due to male factors than if it was due to other causes.

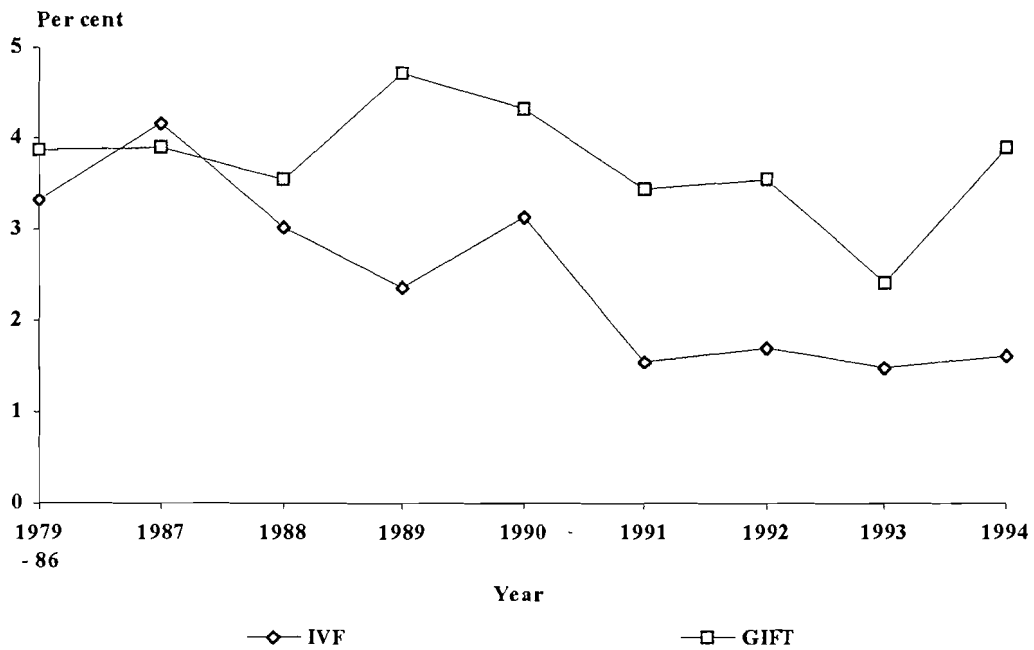
### 3.3.8 Multiple pregnancies

Multiple pregnancy occurred in 16.8% of IVF pregnancies in 1994, slightly less than the proportion of 17.3% in 1993 (Table 48) but much higher than that for all Australian births (1.4% in 1993). Twin IVF pregnancies declined slightly from 15.7% in 1993 to 15.1% in 1994 (Figure 14), and there were 1.5% and 1.6% triplet pregnancies in 1993 and 1994, respectively (Figure 15). One quadruplet pregnancy occurred in each of these years.



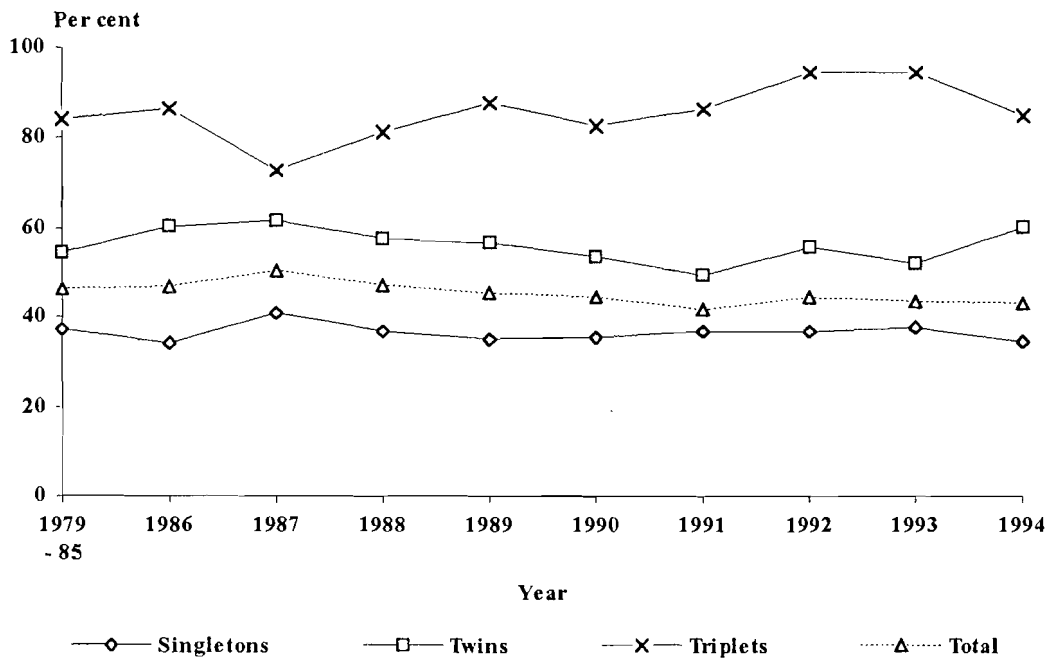
Multiple pregnancy was more likely after transfer of fresh embryos than after transfer of frozen/thawed embryos. For the combined years up to 1994, twins occurred in 18.5%, and triplets in 2.8%, of pregnancies after transfer of fresh embryos. Among pregnancies after transfer of frozen embryos, twins occurred in 12.2% and triplets in 0.7%.

**Figure 15: Incidence of triplet pregnancy, IVF and GIFT, 1979-1994**



The likelihood of multiple pregnancy depends on the number of embryos transferred. In 1994, twins occurred in 13.3% of IVF pregnancies after transfer of 2 embryos, in 19.8% after transfer of 3 embryos, and in 23.1% after transfer of 4 embryos (Table 49). Among 614 pregnancies conceived after microinsemination in 1990-1994, there were 100 multiple births (16.3%); twins occurred in 90 (14.7%), triplets in 9 (1.5%) and quadruplets in 1 (0.2%).

**Figure 16: Caesarean birth rates, singleton and multiple IVF pregnancies, 1979-1994**



### 3.3.9 Method of delivery

As in previous years, caesarean rates were higher for multiple than for singleton IVF pregnancies (Figure 16). In 1994, the caesarean rate was 34.8% for singleton pregnancies, 60.2% for twin pregnancies and 85.2% for triplet pregnancies (Table 50). The caesarean rate for singleton IVF pregnancies was considerably higher than the rate of 19.2% for singleton Australian births in that year and was higher in all maternal age groups.

### 3.3.10 Sex of infants

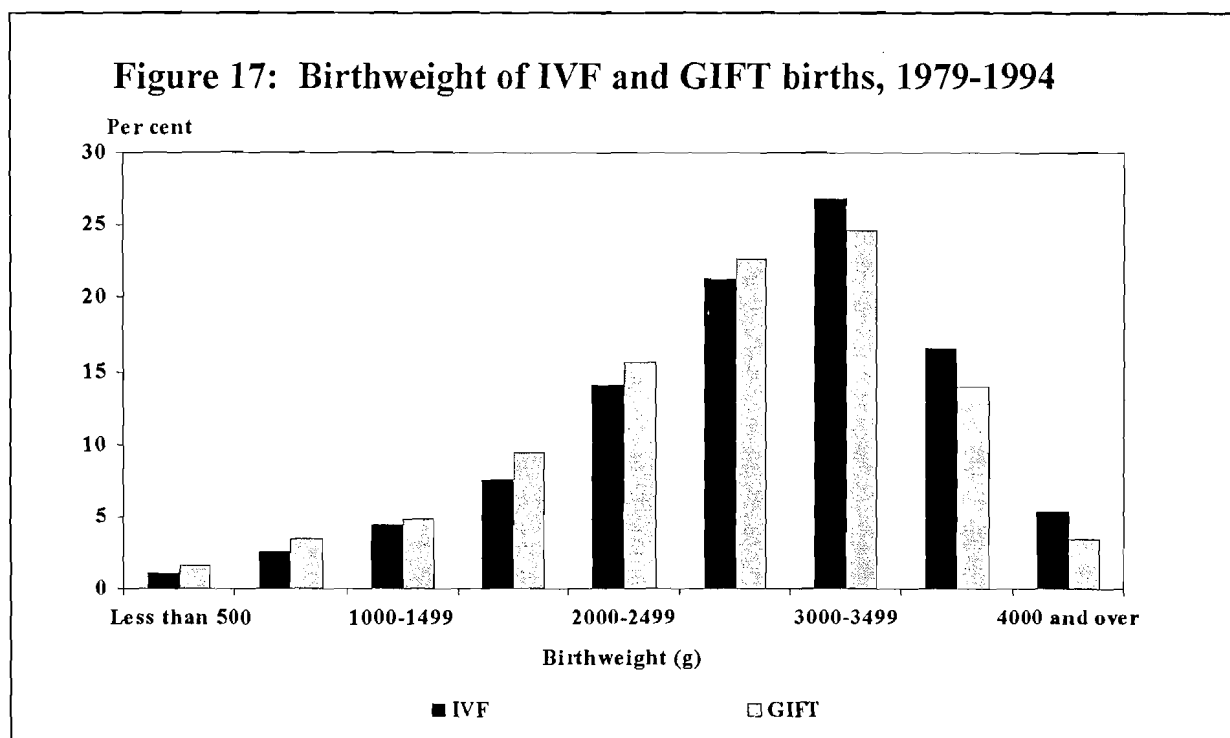
The sex ratio of infants born after IVF was 106.5 in 1994, similar to that in previous years (Table 51). The sex ratio of infants born in all years after use of donor sperm was 97.0 among 1,064 births; after use of donor oocytes, it was 109.9 among 246 births; and after use of frozen embryos, it was 110.9 among 2,514 births. Among the 723 births after microinsemination, the sex ratio was 107.2.

### 3.3.11 Birthweight

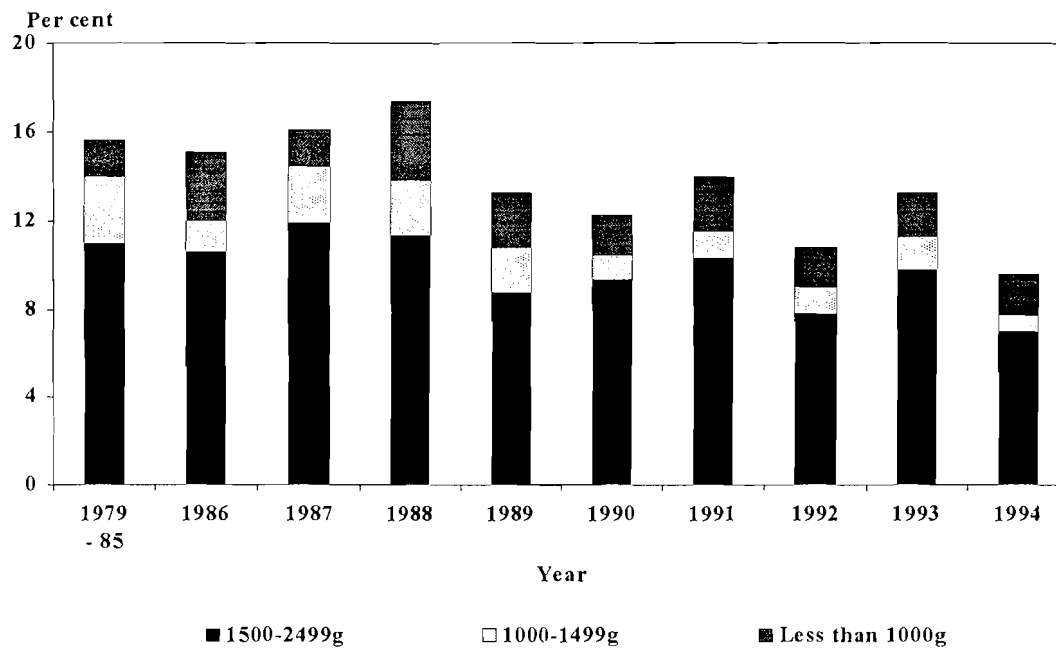
The mean birthweight and the incidence of low birthweight (less than 2500g) for infants born after IVF in 1994 differed considerably from the birthweights for all Australian births in 1994. The mean birthweight of IVF births in 1994 was 2,925g (Table 52), 434g less than the mean birthweight of 3,359g for all Australian births in 1994. The high incidence of multiple births after IVF accounted for much of this difference (Table 53). For singleton births, the mean birthweight was 3,232g after IVF and 3,387g for all Australian births; for twins, 2,319g and 2,386g, respectively; and for triplets, 1,507g and 1,645g, respectively. Among singleton IVF births in 1994, low birthweight occurred in 9.6%, compared with 5.0% for all singleton births in Australia in 1994.

The mean birthweight of 514 singleton births after microinsemination was 3,230g (Table 54), similar to that for all singleton IVF births. Low birthweight occurred in 11.0% of singleton births after microinsemination, in 11.1% after donor sperm, in 15.2% after donor oocytes, and in 8.3% after embryo freezing (Table 55).

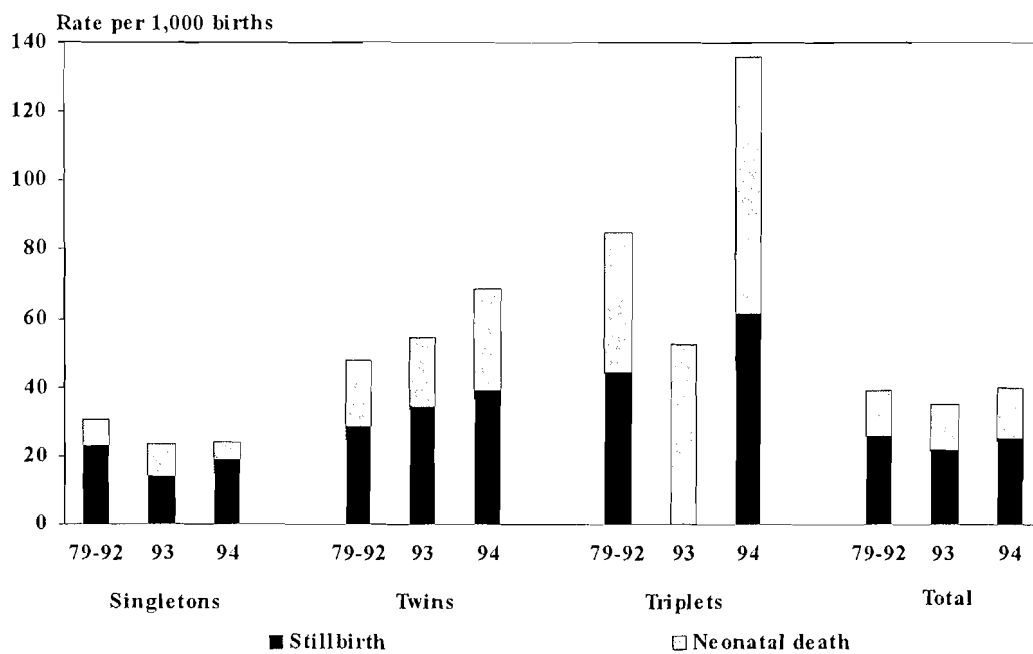
There were relatively fewer low birthweight infants born after IVF than after GIFT (Figure 17) and the incidence of low birthweight in singleton IVF births was lower in 1994 than in previous years (Figure 18).



**Figure 18: Incidence of low birthweight in singleton IVF births, 1979-1994**



**Figure 19: Perinatal mortality in singleton and multiple IVF births, 1979-1994**



### **3.3.12 Perinatal mortality**

Perinatal deaths include fetal deaths (stillbirths) of at least 20 weeks' gestation and neonatal deaths of liveborn infants occurring within 28 days of birth. The perinatal death rate for all IVF births in 1994 was 40.4 per 1,000 births (Table 56), slightly higher than in previous years (Figure 19) and attributable to relatively more deaths among multiple births. Among 724 births after microinsemination in 1990-1994, the perinatal death rate was 33.1 per 1,000 births; for singleton births, it was 19.5 per 1,000 births, for twins, 61.5 per 1,000 births, and for triplets, 111.1 per 1,000 births.

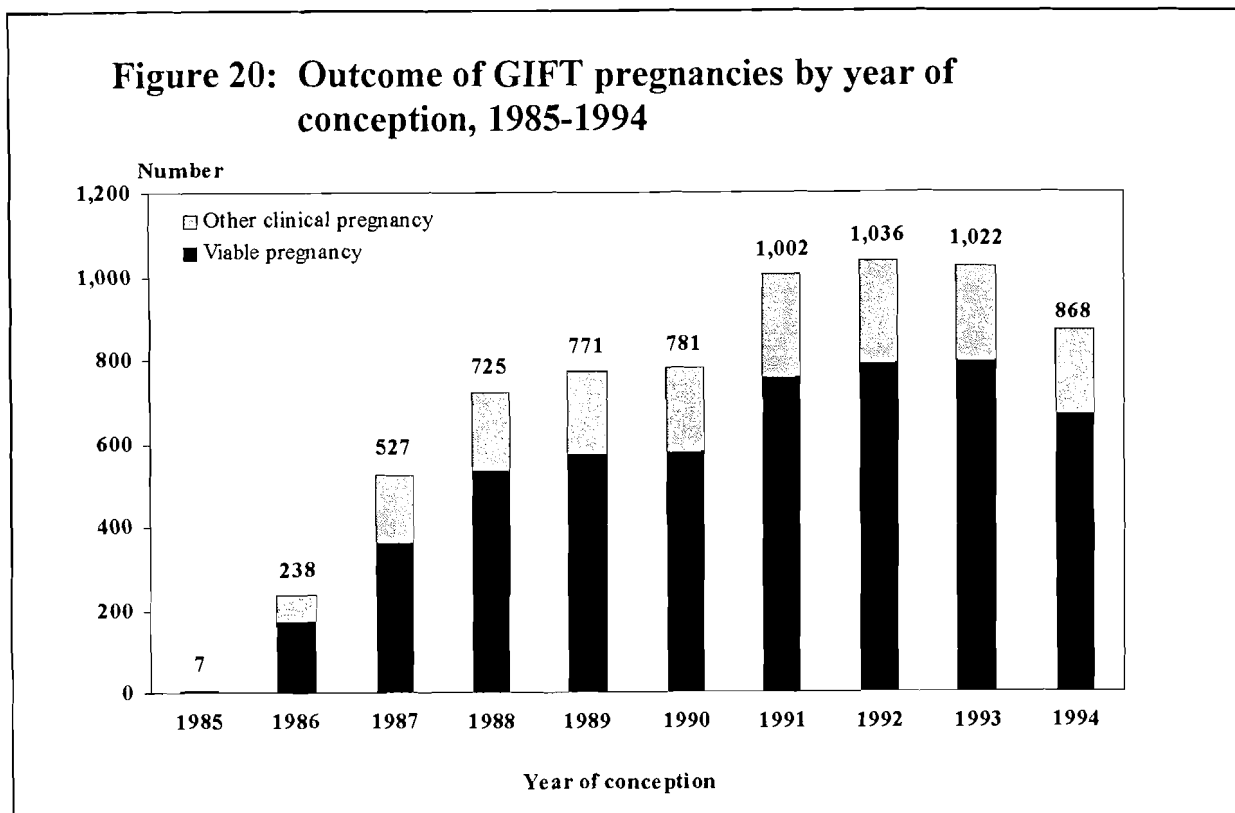
### **3.3.13 Congenital malformations**

Among 11,842 live births, stillbirths and induced abortions of at least 16 weeks' gestation after IVF in 1979-1994, there were 304 (2.6%) infants and fetuses with major congenital malformations (Table 57). The malformation rate was higher in singleton births (2.9%) than in multiple births (1.9%).

Among pregnancies conceived in 1990-1994 after treatment of male infertility by microinsemination, there were 5 pregnancies terminated for fetal abnormality and 724 births. Major congenital malformations were notified in 26 fetuses and infants, a malformation rate of 3.6%. There were 22 (4.2%) malformations among 518 singleton pregnancies and 4 (1.9%) among 211 multiple births.

## 4 GIFT pregnancies

The number of GIFT pregnancies declined substantially in 1994, after showing little change between 1991 and 1993 (Table 58, Figure 20). There were 1,002 GIFT pregnancies in 1991, 1,036 in 1992, 1,022 in 1993, and only 868 in 1994. In 1994, 75.2% of GIFT pregnancies resulted in live births, similar to the proportion in previous years.



### 4.1 Maternal and paternal characteristics

#### 4.1.1 Place of residence

In 1994, Queensland continued to have a relatively high proportion of GIFT pregnancies and there was a decline in the proportion in Victoria and South Australia (Table 59).

#### 4.1.2 Parental age

Maternal and paternal ages for GIFT pregnancies in 1994 were similar to those in previous years (Tables 60 and 61). Fathers were relatively older than mothers, with more than three times as many fathers aged 40 years and over. In 1985-1994, 4.8% of mothers and 18.1% of fathers were in this age group. Women who became pregnant after GIFT were generally older than the mothers of all babies born in Australia, and slightly younger than those who became pregnant after IVF. In 1994, 30.7% of GIFT pregnancies were to women aged 35 years and over, compared with 34.3% of IVF pregnancies and 12.6% of all Australian births.

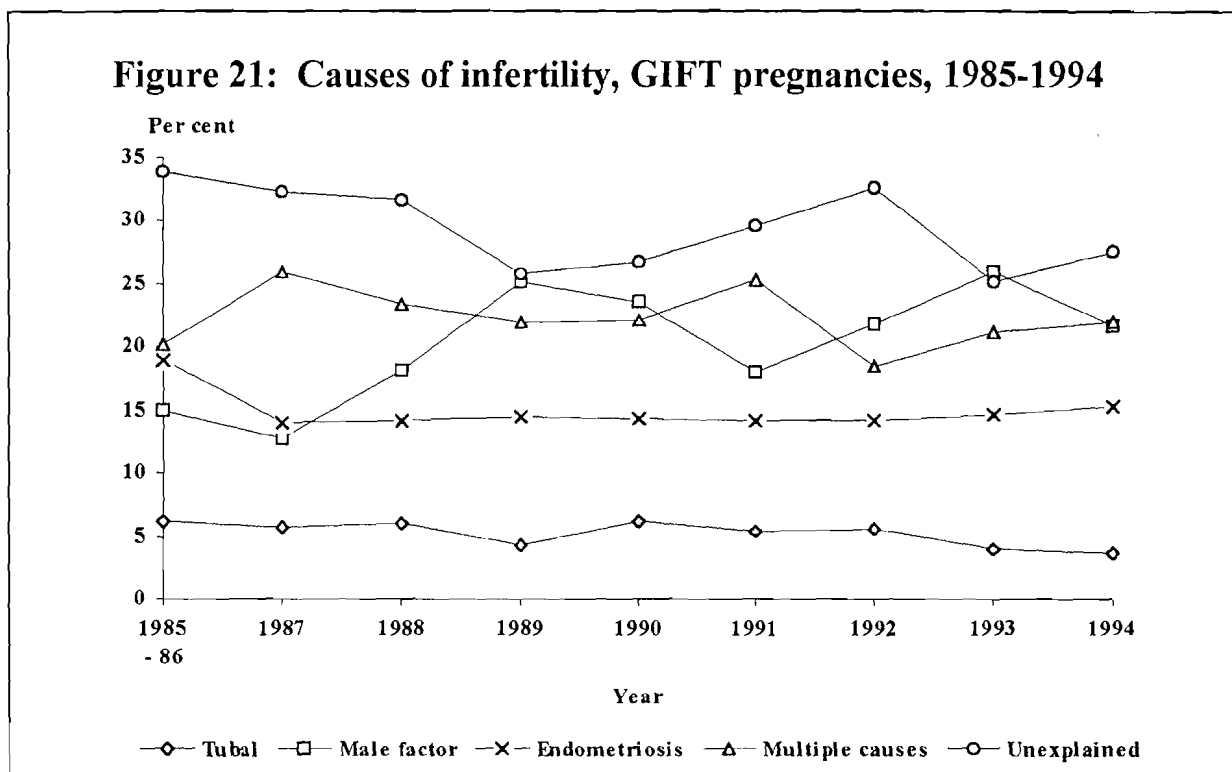
#### 4.1.3 Previous pregnancies

Women who conceived by GIFT in 1994 were slightly more likely to have been pregnant more than once previously than those who had conceived by GIFT in earlier years (Table 62).

#### 4.1.4 Duration and causes of infertility

Among women conceiving by GIFT in 1994, more than 50% had been infertile for periods of less than 4 years, similar to 1993 but relatively more than in earlier years (Table 63). The likelihood of spontaneous abortion increased with longer duration of infertility (Table 64).

The causes of infertility that preceded GIFT pregnancies in 1994 were similar to those in previous years (Table 65, Figure 21). Three-quarters (75.2%) of GIFT pregnancies resulted in live births (Table 66).



## 4.2 Management of GIFT pregnancies

### 4.2.1 Ovarian stimulation

The trend of increasing use of GnRH analogues (91.1%) and declining use of clomiphene (8.1%) to induce ovulation (Table 67) was very similar to that for IVF pregnancies (Figure 7). Over half (50.8%) of GIFT pregnancies occurred in the first treatment cycle in 1994, and another quarter (25.7%) occurred in the second cycle, slightly higher than in 1993 (Table 68).

### 4.2.2 Number of oocytes collected and transferred

The mean number of oocytes collected in treatment cycles that resulted in GIFT pregnancies was 8.2 in 1994 (Table 69), slightly less than in 1993 but much lower than the mean of 11.4 for IVF pregnancies (Figure 8). In 1994, 8 or more oocytes were collected in almost half (48.1%) of all treatment cycles.

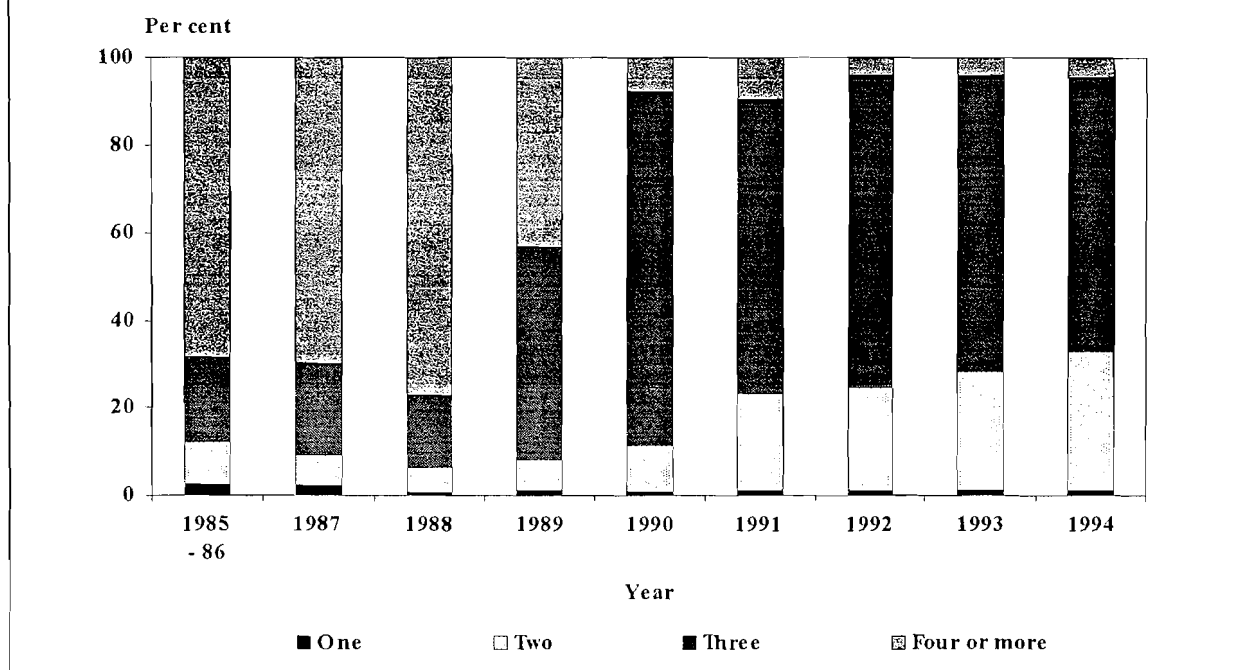
In 1994, 95.5% of GIFT pregnancies followed transfer for three or fewer oocytes (Table 70), compared with 95.8% in 1993. There was an increasing trend in pregnancies after transfer of 2 oocytes (Figure 22). The proportion of pregnancies with live births varied little with the number of oocytes transferred (Table 71).

### 4.2.3 Drugs used in luteal phase of pregnancy

Most women (93.3%) who became pregnant after GIFT in 1994 were treated with drugs during the luteal phase (Table 72). Human chorionic gonadotrophin (hCG) and progestagen were the most commonly used drugs, in 74.9% and 17.8% of GIFT pregnancies, respectively.



**Figure 22: Percentage distribution of number of oocytes transferred, GIFT pregnancies, 1985-1994**



### 4.3 Outcome of pregnancy

#### 4.3.1 Maternal deaths

Three maternal deaths have been reported in GIFT pregnancies, but there were no deaths in 1994.

#### 4.3.2 Spontaneous abortion and ectopic pregnancy

Among almost 7,000 GIFT pregnancies conceived between 1985 and 1994, spontaneous abortion was the outcome in 20.8% (Table 73).

In 1994, spontaneous abortion occurred in 21.0% of intrauterine GIFT pregnancies, slightly more than in 1993 (Table 74). Older women had higher rates of spontaneous abortion - 42.6% for those aged 40-44 years and 58.8% for those aged 45 and over (Table 75).

Ectopic pregnancy occurred in 2.5% of GIFT pregnancies in 1994, slightly less than in previous years (Table 76).

#### 4.3.3 Complications of pregnancy

The comments under this heading in Section 3.3.6 should be noted. Information was not recorded for this data item in 1,123 (23.8%) of the 4,709 pregnancies conceived after GIFT between 1990 and 1994. Among 3,586 GIFT pregnancies for which information was recorded, threatened abortion was reported in 6.9%, placenta praevia in 0.9%, antepartum haemorrhage in 2.3%, pregnancy-induced hypertension in 7.3%, and other complications in 21.1% (Table 77).

#### 4.3.4 Viable pregnancies of at least 20 weeks' gestation

Reflecting the overall decline in the number of GIFT pregnancies in 1994, the number of births in Australia decreased from 1,023 in 1992 and 1,006 in 1993 to 865 in 1994. There were very few births after GIFT in New Zealand - 9 in 1992, 5 in 1993, and 7 in 1994. The total of 2,715 births after IVF and GIFT in Australia in 1994 represented 1.0% of the national births.

Preterm birth occurred in 26.7% of all GIFT pregnancies in 1994 (Table 78), similar to other years, and in 13.8% of singleton pregnancies, in 56.5% of twin pregnancies, and in 96.2% of triplet pregnancies. In singleton GIFT pregnancies, there was a higher incidence of preterm birth for births to mothers in the youngest and oldest age groups (Table 79). Relatively lower rates of preterm birth occurred when infertility was due to tubal or male factors (Table 80).

#### **4.3.5 Multiple pregnancies**

Twins occurred in 22.3% of GIFT pregnancies in 1994 (Table 81), similar to the rate in recent years but higher than for IVF (Figure 14). The triplet rate increased from its lowest value of 2.5% in 1993 to 3.9% in 1994, similar to the rate of earlier years (Figure 15). In 1994, there were 2 quadruplet pregnancies and no quintuplet pregnancies.

In 1994, as in previous years, higher multiple pregnancy rates were associated with transfer of an increasing number of oocytes (Table 82). Multiple pregnancies occurred in 1 of 11 pregnancies after transfer of one oocyte, in 18.2% after two oocytes, in 29.4% after three oocytes, and in 55.2% after 4 oocytes.

#### **4.3.6 Method of delivery**

Caesarean birth rates for GIFT pregnancies were higher for multiple births than for singleton births (Table 83). In 1994, the caesarean rate was 29.9% in singleton pregnancies, 49.7% in twin pregnancies, and 92.0% in triplet pregnancies. In singleton GIFT pregnancies, the caesarean rate was 14.3% for mothers aged less than 25 years, 26.0% for those aged 25-29, 27.7% for those aged 30-34, 31.8% for those aged 35-39, and 58.1% for mothers aged 40 years and over.

#### **4.3.7 Sex of infants**

The sex ratio of infants born after GIFT in 1994 was 111.2, similar to that for previous years (Table 84).

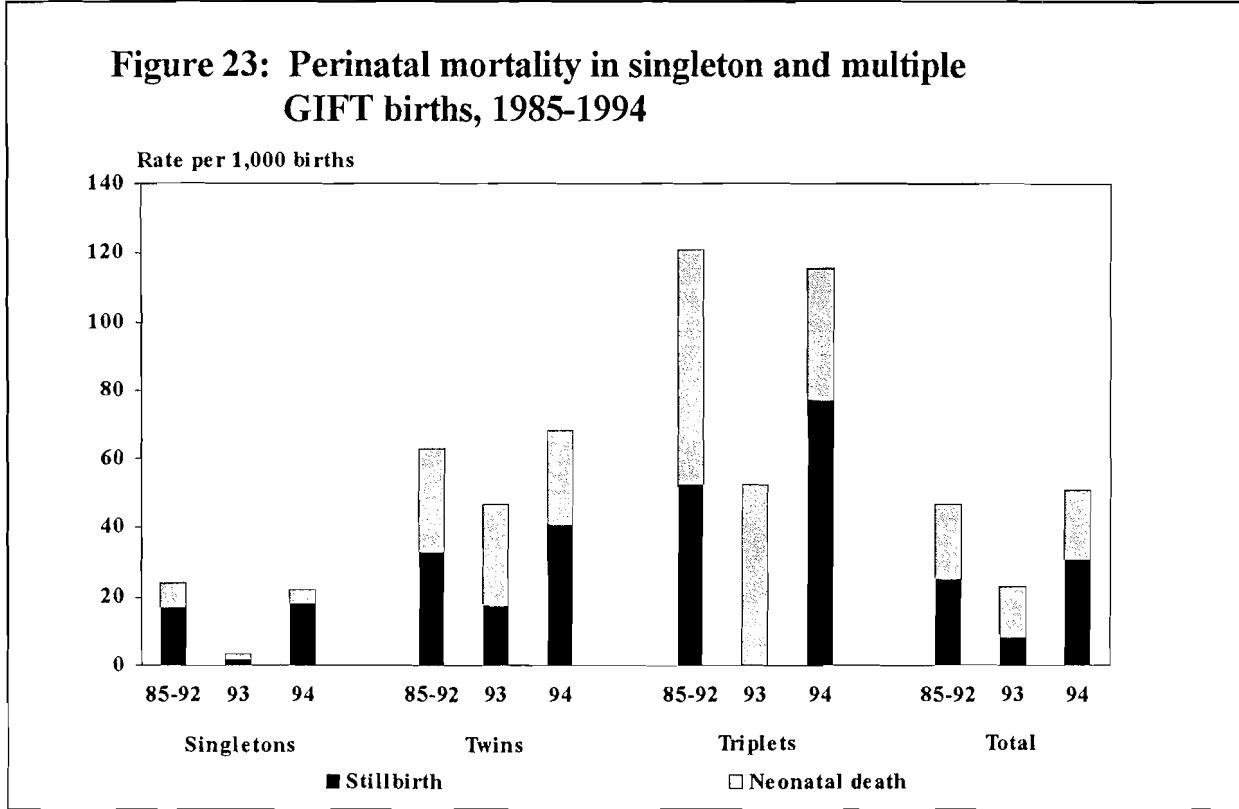
#### **4.3.8 Infant's birthweight**

The mean birthweight of 2,723g after GIFT in 1994 (Table 85) was slightly higher than that of 2,702g in previous years but less than the average of 2,925g after IVF. The high incidence of multiple births after GIFT accounted for much of this difference (Table 86). In 1994, for singleton GIFT births, the mean birthweight was 3,185g; for twins, it was 2,272g; and for triplets, it was 1,711g.

In 1994, low birthweight occurred in 33.8% of all GIFT pregnancies (Table 86), slightly less than the rate of previous years (35.3%). There were relatively more low birthweight infants born after GIFT than after IVF (Figure 17). Low birthweight was more likely with increasing plurality, ranging from 9.4% for singleton GIFT births to 57.0% for twins and 93.5% for triplets.

**4.3.9 Perinatal mortality**

The perinatal death rate after GIFT in 1994 was 50.5 per 1,000 births (Table 87), higher than the total rate of 42.5 per 1,000 births in previous years. There were relatively more stillbirths in 1994; the stillbirth rate in that year was 31.0 per 1,000 births compared with 22.4 per 1,000 in previous years (Figure 23). Of the 44 perinatal deaths after GIFT in 1994, 33 (75.0%) were in multiple births, including 4 neonatal deaths in a quadruplet pregnancy.



**4.3.10 Congenital malformations**

Major congenital malformations occurred in 174 (2.5%) of 6,842 births and induced abortions after GIFT in the period from 1985 to 1994 (Table 88). The malformation rate of 2.7% in singleton births was slightly higher than that of 2.3% in multiple births.

## 5 Tables

**Table 1: Treatment cycles and treatment ratios for assisted conception, selected Australian States and New Zealand, 1994 and 1995**

State / Country	Women aged 25-44 years (thousands)		Treatment cycles		Treatment ratio*	
	1994	1995	1994	1995	1994	1995
New South Wales	927	937	5,630	6,098	607	651
Victoria	699	703	6,444	6,301	922	896
Queensland	489	502	2,495	2,705	510	539
Western Australia	269	273	1,115	1,446	415	530
South Australia / Northern Territory	255	258	1,920	1,988	753	771
Tasmania / Australian Capital Territory	121	121	398	578	329	478
Australia	2,761	2,792	18,002	19,116	652	685
New Zealand	546	554	874	1,065	160	192

\* Treatment cycles per 100,000 women aged 25-44 years

**Table 2. Oocyte retrieval cycles for IVF and GIFT, by age, cause of infertility, and drugs used to stimulate ovulation, selected IVF units, 1994**

Characteristic	Oocyte retrieval cycles attempted					
	IVF : uterine transfer		IVF : tubal transfer		GIFT	
	Number	Per cent	Number	Per cent	Number	Per cent
<b>Woman's age (at start of treatment) *</b>						
<20	-	-	-	-	-	-
20-24	107	1.7	14	3.1	61	2.1
25-29	979	15.3	81	17.6	548	18.9
30-34	2,383	37.2	168	36.6	1,114	38.4
35-39	2,096	32.7	136	29.6	805	27.8
40+	839	13.1	60	13.1	370	12.8
<b>All ages</b>	<b>6,404</b>	<b>100.0</b>	<b>459</b>	<b>100.0</b>	<b>2,898</b>	<b>100.0</b>
<b>Cause(s) of infertility **</b>						
Tubal only	2,418	38.6	5	1.1	139	4.7
Other female only	716	11.4	70	15.3	854	28.9
Male factors only	1,561	24.9	186	40.5	441	14.9
Multiple causes	763	12.2	157	34.2	513	17.4
Unexplained	810	12.9	41	8.9	1,009	34.1
<b>All causes</b>	<b>6,268</b>	<b>100.0</b>	<b>459</b>	<b>100.0</b>	<b>2,956</b>	<b>100.0</b>
<b>Ovarian stimulation ***</b>						
GnRH analogues + other	6,343	87.9	443	97.6	2,671	92.8
No GnRH analogues	-	-	-	-	-	-
· clomiphene + any other	579	8.0	7	1.5	147	5.1
· other drugs	16	0.2	3	0.7	25	0.9
· natural cycles	276	3.8	1	0.2	36	1.3
<b>All drugs</b>	<b>7,214</b>	<b>100.0</b>	<b>454</b>	<b>100.0</b>	<b>2,879.0</b>	<b>100.0</b>

\* No data for E, H, U

\*\* No data for E, F, H, U

\*\*\* No data for E, H

**Table 3. Embryo transfer cycles for IVF and GIFT, by number of embryos or oocytes transferred, selected IVF units, 1994**

Number of embryos / oocytes transferred	Embryo transfer cycles					
	IVF : uterine transfer		IVF : tubal transfer		GIFT	
	Number	Per cent	Number	Per cent	Number	Per cent
One	891	17.8	81	19.2	140	4.6
Two	2,058	41.1	109	25.8	1,059	34.9
Three	1,936	38.7	216	51.2	1,690	55.7
Four	122	2.4	16	3.8	131	4.3
Five	1	0.0	-	-	5	0.2
Six or more	-	-	-	-	7	0.2
<b>All transfers*</b>	<b>5,008</b>	<b>100.0</b>	<b>422</b>	<b>100.0</b>	<b>3,032</b>	<b>100.0</b>

\* No data for E

**Table 4. IVF pregnancies after transfer of fresh embryos to uterus, numbers and pregnancy rates in each IVF unit, 1994**

Stage of treatment	IVF unit										
	A	B	C	D	E	F	G	H	I	J	K
Treatment cycles commenced	1,452	1,255	699	237	632	448	226	103	287	163	335
Cycles with oocyte retrieval	1,238	1,003	606	210	578	339	214	92	231	155	246
· by ultrasound guidance	1,238	1,003	563	209	578	339	214	92	197	155	246
· by laparoscopy	-	-	43	1	-	-	-	-	34	-	-
Cycles with embryo transfer	935	781	525	159	528	273	174	69	201	123	211
Clinical pregnancies	124	159	66	16	110	52	24	7	46	15	29
Live-birth pregnancies	87	116	41	13	83	35	19	4	39	9	20
Clinical pregnancies per 100 oocyte retrieval cycles	10.0	15.9	10.9	7.6	19.0	15.3	11.2	7.6	19.9	9.7	11.8
Live-birth pregnancies per 100 oocyte retrieval cycles	7.0	11.6	6.8	6.2	14.4	10.3	8.9	4.3	16.9	5.8	8.1

Stage of treatment	IVF unit										
	L*	M	N	O	P	Q	R	S	T	U	V
Treatment cycles commenced	152	163	204	249	187	201	95	95	-	138	135
Cycles with oocyte retrieval	152	154	147	142	152	185	75	84	-	101	127
· by ultrasound guidance	152	154	144	142	152	185	75	84	-	91	127
· by laparoscopy	-	-	3	-	-	-	-	-	-	10	-
Cycles with embryo transfer	126	122	102	121	120	178	68	72	-	77	89
Clinical pregnancies	15	12	11	25	34	41	5	11	-	16	26
Live-birth pregnancies	13	12	7	20	24	23	5	10	-	12	18
Clinical pregnancies per 100 oocyte retrieval cycles	9.9	7.8	7.5	17.6	22.4	22.2	6.7	13.1	-	15.8	20.5
Live-birth pregnancies per 100 oocyte retrieval cycles	8.6	7.8	4.8	14.1	15.8	12.4	6.7	11.9	-	11.9	14.2

Stage of treatment	IVF unit							All units
	W	X	Y	Z	AA	AB		
Treatment cycles commenced	158	187	56	116	71	54	8,098	
Cycles with oocyte retrieval	131	175	51	101	68	38	6,795	
· by ultrasound guidance	131	175	51	-	68	38	6,603	
· by laparoscopy	-	-	-	-	-	-	91	
Cycles with embryo transfer	105	154	40	85	57	29	5,524	
Clinical pregnancies	24	22	17	20	11	6	944	
Live-birth pregnancies	15	18	15	18	11	3	690	
Clinical pregnancies per 100 oocyte retrieval cycles	18.3	12.6	33.3	19.8	16.2	15.8	13.9	
Live-birth pregnancies per 100 oocyte retrieval cycles	11.5	10.3	29.4	17.8	16.2	7.9	10.2	

\* Treatment cycles commenced' not given

**Table 5. IVF pregnancies after microinsemination, numbers and pregnancy rates in each IVF unit, 1994**

Stage of treatment	IVF unit										
	A	B	C	D	E	F	G	H	I	J	K
Cycles with oocyte retrieval	641	403	175	142	476	261	109	122	27	22	67
Cycles with embryo transfer	576	361	135	129	456	214	94	83	18	19	60
Clinical pregnancies	64	70	22	24	119	37	11	11	2	7	7
Live-birth pregnancies	45	52	19	14	84	24	4	8	2	5	5
Clinical pregnancies per 100 oocyte retrieval cycles	10.0	17.4	12.6	16.9	25.0	14.2	10.1	9.0	7.4	31.8	10.4
Live-birth pregnancies per 100 oocyte retrieval cycles	7.0	12.9	10.9	9.9	17.6	9.2	3.7	6.6	7.4	22.7	7.5

Stage of treatment	IVF unit										
	L	M	N	O	P	Q	R	S	T	U	V
Cycles with oocyte retrieval	-	105	28	51	61	46	14	6	-	4	-
Cycles with embryo transfer	-	95	15	47	51	43	12	5	-	3	-
Clinical pregnancies	-	15	1	18	6	3	3	2	-	-	-
Live-birth pregnancies	-	13	1	12	4	3	2	1	-	-	-
Clinical pregnancies per 100 oocyte retrieval cycles	-	14.3	3.6	35.3	9.8	6.5	21.4	33.3	-	-	-
Live-birth pregnancies per 100 oocyte retrieval cycles	-	12.4	3.6	23.5	6.6	6.5	14.3	16.7	-	-	-

Stage of treatment	IVF unit						All units
	W	X	Y	Z	AA	AB	
Cycles with oocyte retrieval	-	-	7	3	-	16	2,786
Cycles with embryo transfer	-	-	6	-	-	14	2,436
Clinical pregnancies	-	-	2	-	-	6	430
Live-birth pregnancies	-	-	1	-	-	4	303
Clinical pregnancies per 100 oocyte retrieval cycles	-	-	28.6	-	-	37.5	15.4
Live-birth pregnancies per 100 oocyte retrieval cycles	-	-	14.3	-	-	25.0	10.9

**Table 6. IVF pregnancies after embryo freezing but without microinsemination, numbers and pregnancy rates in each IVF unit, 1994**

Stage of treatment	IVF unit										
	A	B	C	D	E	F	G	H	I	J	K
Cycles with embryo transfer	1,265	293	108	145	352	269	187	206	189	91	123
Clinical pregnancies	207	34	18	18	56	49	38	49	28	13	19
Live-birth pregnancies	153	25	11	11	49	40	20	25	17	6	15
Clinical pregnancies per 100 embryo transfer cycles	16.4	11.6	16.7	12.4	15.9	18.2	20.3	23.8	14.8	14.3	15.4
Live-birth pregnancies per 100 embryo transfer cycles	12.1	8.5	10.2	7.6	13.9	14.9	10.7	12.1	9.0	6.6	12.2

Stage of treatment	IVF unit										
	L	M	N	O	P	Q	R	S	T	U	V
Cycles with embryo transfer	111	186	124	65	106	85	29	123	-	37	74
Clinical pregnancies	12	18	12	7	15	12	6	17	-	1	10
Live-birth pregnancies	12	15	8	7	7	7	6	12	-	-	8
Clinical pregnancies per 100 embryo transfer cycles	10.8	9.7	9.7	10.8	14.2	14.1	20.7	13.8	-	2.7	13.5
Live-birth pregnancies per 100 embryo transfer cycles	10.8	8.1	6.5	10.8	6.6	8.2	20.7	9.8	-	-	10.8

Stage of treatment	IVF unit						All units
	W	X	Y	Z	AA	AB	
Cycles with embryo transfer	37	11	52	18	7	16	4,309
Clinical pregnancies	5	1	10	-	-	2	657
Live-birth pregnancies	4	-	9	-	-	2	469
Clinical pregnancies per 100 embryo transfer cycles	13.5	9.1	19.2	-	-	12.5	15.2
Live-birth pregnancies per 100 embryo transfer cycles	10.8	-	17.3	-	-	12.5	10.9



**Table 7. IVF pregnancies after microinsemination and embryo freezing, numbers and pregnancy rates in each IVF unit, 1994**

Stage of treatment	IVF unit										
	A	B	C	D	E	F	G	H	I	J	K
Cycles with embryo transfer	530	26	6	30	86	164	-	5	-	-	17
Clinical pregnancies	98	2	-	2	14	20	-	2	-	-	3
Live-birth pregnancies	79	2	-	1	12	16	-	1	-	-	2
Clinical pregnancies per 100 embryo transfer cycles	18.5	7.7	-	6.7	16.3	12.2	-	40.0	-	-	17.6
Live-birth pregnancies per 100 embryo transfer cycles	14.9	7.7	-	3.3	14.0	9.8	-	20.0	-	-	11.8

Stage of treatment	IVF unit										
	L	M	N	O	P	Q	R	S	T	U	V
Cycles with embryo transfer	-	36	-	2	11	5	-	1	-	-	-
Clinical pregnancies	-	5	-	-	4	2	-	-	-	-	-
Live-birth pregnancies	-	5	-	-	4	1	-	-	-	-	-
Clinical pregnancies per 100 embryo transfer cycles	-	13.9	-	-	36.4	40.0	-	-	-	-	-
Live-birth pregnancies per 100 embryo transfer cycles	-	13.9	-	-	36.4	20.0	-	-	-	-	-

Stage of treatment	IVF unit						All units
	W	X	Y	Z	AA	AB	
Cycles with embryo transfer	-	-	5	-	2	3	929
Clinical pregnancies	-	-	1	-	-	1	154
Live-birth pregnancies	-	-	1	-	-	-	124
Clinical pregnancies per 100 embryo transfer cycles	-	-	20.0	-	-	33.3	16.6
Live-birth pregnancies per 100 embryo transfer cycles	-	-	20.0	-	-	-	13.3

**Table 8. IVF pregnancies after use of donor oocytes, numbers and pregnancy rates in each IVF unit, 1994**

Stage of treatment	IVF unit										
	A	B	C	D	E	F	G	H	I	J	K
Cycles with embryo transfer	78	87	21	3	46	15	-	41	9	1	4
Clinical pregnancies	9	14	1	-	9	2	-	6	2	-	-
Live-birth pregnancies	6	8	-	-	6	2	-	5	2	-	-
Clinical pregnancies per 100 embryo transfer cycles	11.5	16.1	4.8	-	19.6	13.3	-	14.6	22.2	-	-
Live-birth pregnancies per 100 embryo transfer cycles	7.7	9.2	-	-	13.0	13.3	-	12.2	22.2	-	-

Stage of treatment	IVF unit										
	L	M	N	O	P	Q	R	S	T	U	V
Cycles with embryo transfer	1	-	4	17	2	23	2	-	-	3	4
Clinical pregnancies	1	-	1	3	-	6	-	-	-	1	-
Live-birth pregnancies	1	-	-	1	-	4	-	-	-	1	-
Clinical pregnancies per 100 embryo transfer cycles	100.0	-	25.0	17.6	-	26.1	-	-	-	33.3	-
Live-birth pregnancies per 100 embryo transfer cycles	100.0	-	-	5.9	-	17.4	-	-	-	33.3	-

Stage of treatment	IVF unit						All units
	W	X	Y	Z	AA	AB	
Cycles with embryo transfer	6	-	2	18	-	4	391
Clinical pregnancies	1	-	-	-	-	-	56
Live-birth pregnancies	1	-	-	-	-	-	37
Clinical pregnancies per 100 embryo transfer cycles	16.7	-	-	-	-	-	14.3
Live-birth pregnancies per 100 embryo transfer cycles	16.7	-	-	-	-	-	9.5

**Table 9. GIFT pregnancies, numbers and pregnancy rates in each IVF unit, 1994**

Stage of treatment	IVF unit										
	A	B	C	D	E	F	G	H	I	J	K
Treatment cycles commenced	14	762	939	313	57	4	306	223	261	100	57
Cycles with oocyte retrieval	14	597	852	268	47	3	286	199	214	90	44
· by ultrasound guidance	14	595	9	29	47	3	286	199	7	-	30
· by laparoscopy	-	2	843	239	-	-	-	-	207	90	14
Cycles with gamete transfer	14	531	836	259	47	3	272	185	207	89	44
Clinical pregnancies	3	130	280	75	19	-	89	46	61	31	13
Live-birth pregnancies	2	93	194	63	15	-	83	31	46	19	7
Clinical pregnancies per 100 oocyte retrieval cycles	21.4	21.8	32.9	28.0	40.4	-	31.1	23.1	28.5	34.4	29.5
Live-birth pregnancies per 100 oocyte retrieval cycles	14.3	15.6	22.8	23.5	31.9	-	29.0	15.6	21.5	21.1	15.9

Stage of treatment	IVF unit										
	L*	M	N	O	P	Q	R	S	T	U	V
Treatment cycles commenced	162	38	44	8	3	-	97	3	164	60	4
Cycles with oocyte retrieval	162	38	33	8	3	-	82	3	141	41	4
· by ultrasound guidance	162	38	-	7	3	-	82	3	141	-	4
· by laparoscopy	-	-	33	1	-	-	-	-	-	41	-
Cycles with gamete transfer	160	38	33	8	3	-	75	3	132	35	4
Clinical pregnancies	31	9	8	5	1	-	18	-	32	8	-
Live-birth pregnancies	27	8	4	5	1	-	18	-	21	6	-
Clinical pregnancies per 100 oocyte retrieval cycles	19.1	23.7	24.2	62.5	33.3	-	22.0	-	22.7	19.5	-
Live-birth pregnancies per 100 oocyte retrieval cycles	16.7	21.1	12.1	62.5	33.3	-	22.0	-	14.9	14.6	-

Stage of treatment	IVF unit						All units
	W	X	Y	Z	AA	AB	
Treatment cycles commenced	7	-	10	-	17	-	3,653
Cycles with oocyte retrieval	7	-	10	-	17	-	3,163
· by ultrasound guidance	7	-	10	-	17	-	1,693
· by laparoscopy	-	-	-	-	-	-	1,470
Cycles with gamete transfer	7	-	10	-	17	-	3,012
Clinical pregnancies	3	-	4	-	7	-	873
Live-birth pregnancies	2	-	4	-	6	-	655
Clinical pregnancies per 100 oocyte retrieval cycles	42.9	-	40.0	-	41.2	-	27.6
Live-birth pregnancies per 100 oocyte retrieval cycles	28.6	-	40.0	-	35.3	-	20.7

\* 'Treatment cycles commenced' not given

**Table 10. Treatment related to embryo freezing in each IVF unit, 1994**

Stage of treatment	IVF unit										
	A	B	C	D	E	F	G	H	I	J	K
Patients having embryos frozen	993	464	170	150	504	441	163	n.a.	214	128	138
Embryos that were frozen	4,942	1,301	675	668	2,025	1,777	580	817	1,066	618	710
Embryos thawed	3,804	1,080	524	512	1,367	1,121	464	803	613	373	457
Patients receiving thawed embryos	1,017	301	112	192	397	446	187	n.a.	156	91	120
Embryos transferred after thawing	3,325	784	311	453	878	900	385	597	407	227	317
Frozen embryos in storage <sup>a</sup>	6,181	2,387	899	1,108	204	n.a.	n.a.	1,831	1,132	630	1,204

Stage of treatment	IVF unit										
	L	M	N	O	P	Q	R	S	T	U	V
Patients having embryos frozen	145	99	95	88	90	100	52	69	-	60	67
Embryos that were frozen	571	443	600	438	456	576	184	410	-	293	290
Embryos thawed	325	556	449	332	404	425	162	414	-	236	253
Patients receiving thawed embryos	112	222	93	56	126	105	29	129	-	27	58
Embryos transferred after thawing	200	397	276	179	260	294	61	334	-	118	161
Frozen embryos in storage <sup>a</sup>	973	780	682	576	776	879	n.a.	288	-	296	445

Stage of treatment	IVF unit						All units
	W	X	Y	Z	AA	AB	
Patients having embryos frozen	47	17	30	23	26	31	4,404*
Embryos that were frozen	238	74	190	102	166	170	19,563*
Embryos thawed	106	63	158	56	30	91	14,375*
Patients receiving thawed embryos	37	11	35	17	10	19	4,105*
Embryos transferred after thawing	78	22	114	38	12	50	10,581*
Frozen embryos in storage <sup>a</sup>	215	96	136	77	200	285	22,280**

n.a. Not available

\* Excludes H

\*\* Excludes F, G, R

<sup>a</sup> 31 December, 1994

**Table 11. Oocyte retrieval cycles for IVF and GIFT, by age, cause of infertility, and drugs used to stimulate ovulation, selected IVF units, 1995**

Characteristic	Oocyte retrieval cycles attempted					
	IVF : uterine transfer		IVF : tubal transfer		GIFT	
	Number	Per cent	Number	Per cent	Number	Per cent
<b>Woman's age (at start of treatment) *</b>						
<20	1	0.0	-	-	3	0.1
20-24	112	1.6	10	3.5	44	2.0
25-29	1,058	15.3	39	13.5	413	18.3
30-34	2,454	35.4	105	36.3	849	37.6
35-39	2,354	34.0	75	26.0	596	26.4
40+	952	13.7	60	20.8	350	15.5
<b>All ages</b>	<b>6,931</b>	<b>100.0</b>	<b>289</b>	<b>100.0</b>	<b>2,255</b>	<b>100.0</b>
<b>Cause(s) of infertility **</b>						
Tubal only	1,717	27.0	2	0.7	91	4.1
Other female only	841	13.2	52	18.0	620	28.0
Male factors only	1,765	27.7	134	46.4	327	14.8
Multiple causes	1,051	16.5	62	21.5	321	14.5
Unexplained	989	15.5	39	13.5	852	38.5
<b>All causes</b>	<b>6,363</b>	<b>100.0</b>	<b>289</b>	<b>100.0</b>	<b>2,211</b>	<b>100.0</b>
<b>Ovarian stimulation</b>						
GnRH analogues + other	6,372	86.9	321	95.3	2,210	92.9
No GnRH analogues						
· clomiphene + any other	564	7.7	8	2.4	126	5.3
· other drugs	27	0.4	1	0.3	5	0.2
· natural cycles	373	5.1	7	2.1	37	1.6
<b>All drugs</b>	<b>7,336</b>	<b>100.0</b>	<b>337</b>	<b>100.0</b>	<b>2,378</b>	<b>100.0</b>

\* No data for I

\*\* No data for F, I, P

**Table 12. Embryo transfer cycles for IVF and GIFT, by number of embryos or oocytes transferred, selected IVF units, 1995**

Number of embryos / oocytes transferred	Embryo transfer cycles					
	IVF : uterine transfer		IVF : tubal transfer		GIFT	
	Number	Per cent	Number	Per cent	Number	Per cent
One	786	14.8	38	15.3	115	4.8
Two	2,404	45.2	73	29.4	964	40.2
Three	2,031	38.2	132	53.2	1,185	49.4
Four	96	1.8	5	2.0	105	4.4
Five	3	0.1	-	-	14	0.6
Six or more	1	0.0	-	-	16	0.7
<b>All transfers</b>	<b>5,321</b>	<b>100.0</b>	<b>248</b>	<b>100.0</b>	<b>2,399</b>	<b>100.0</b>

**Table 13. IVF pregnancies after transfer of fresh embryos to uterus, numbers and pregnancy rates in each IVF unit, 1995**

Stage of treatment	IVF unit										
	A	B	C	D	E	F	G	H	I	J	K
Treatment cycles commenced	1,456	1,236	724	654	234	353	196	337	111	344	419
Cycles with oocyte retrieval	1,154	911	629	576	219	272	184	263	97	256	117
· by ultrasound guidance	1,154	909	601	576	217	271	184	247	97	255	117
· by laparoscopy	-	2	28	-	2	1	-	16	-	1	-
Cycles with embryo transfer	850	738	542	523	147	203	132	217	61	233	102
Clinical pregnancies	120	143	80	110	23	40	22	47	9	53	21
Viable pregnancies	95	117	56	82	18	27	12	43	4	43	17
Clinical pregnancies per 100 oocyte retrieval cycles	10.4	15.7	12.7	19.1	10.5	14.7	12.0	17.9	9.3	20.7	17.9
Viable pregnancies per 100 oocyte retrieval cycles	8.2	12.8	8.9	14.2	8.2	9.9	6.5	16.3	4.1	16.8	14.5

Stage of treatment	IVF unit										
	L	M	N*	O	P	Q	R	S	T	U	V
Treatment cycles commenced	126	113	155	267	173	151	114	172	75	-	189
Cycles with oocyte retrieval	115	104	155	242	106	105	91	156	61	-	164
· by ultrasound guidance	115	104	155	238	106	104	91	156	61	-	161
· by laparoscopy	-	-	-	4	-	1	-	-	-	-	3
Cycles with embryo transfer	97	87	128	233	87	75	79	139	57	-	139
Clinical pregnancies	20	10	10	53	14	10	13	24	11	-	26
Viable pregnancies	18	10	8	41	12	5	9	22	11	-	23
Clinical pregnancies per 100 oocyte retrieval cycles	17.4	9.6	6.5	21.9	13.2	9.5	14.3	15.4	18.0	-	15.9
Viable pregnancies per 100 oocyte retrieval cycles	15.7	9.6	5.2	16.9	11.3	4.8	9.9	14.1	18.0	-	14.0

Stage of treatment	IVF unit							All units
	W	X	Y	Z	AA	AB	AC	
Treatment cycles commenced	95	187	53	95	59	82	21	8,191
Cycles with oocyte retrieval	78	173	49	88	38	67	21	6,491
· by ultrasound guidance	78	173	49	88	38	-	20	6,365
· by laparoscopy	-	-	-	-	-	-	1	59
Cycles with embryo transfer	65	150	36	80	32	46	17	5,295
Clinical pregnancies	20	29	11	7	6	10	2	944
Viable pregnancies	17	26	9	6	5	9	2	747
Clinical pregnancies per 100 oocyte retrieval cycles	25.6	16.8	22.4	8.0	15.8	14.9	9.5	14.5
Viable pregnancies per 100 oocyte retrieval cycles	21.8	15.0	18.4	6.8	13.2	13.4	9.5	11.5

\* 'Treatment cycles commenced' not given

**Table 14. IVF pregnancies after microinsemination, numbers and pregnancy rates in each IVF unit, 1995**

Stage of treatment	IVF unit										
	A	B	C	D	E	F	G	H	I	J	K
Cycles with oocyte retrieval	833	527	331	569	169	232	207	103	159	104	165
Cycles with embryo transfer	729	464	308	534	156	195	167	90	141	86	157
Clinical pregnancies	101	101	53	120	30	31	28	24	14	21	28
Viable pregnancies	76	90	35	101	25	24	20	23	11	17	21
Clinical pregnancies per 100 oocyte retrieval cycles	12.1	19.2	16.0	21.1	17.8	13.4	13.5	23.3	8.8	20.2	17.0
Viable pregnancies per 100 oocyte retrieval cycles	9.1	17.1	10.6	17.8	14.8	10.3	9.7	22.3	6.9	16.3	12.7

Stage of treatment	IVF unit										
	L	M	N	O	P	Q	R	S	T	U	V
Cycles with oocyte retrieval	186	181	8	85	39	52	42	62	70	-	5
Cycles with embryo transfer	170	153	6	81	28	40	38	56	61	-	5
Clinical pregnancies	37	23	-	21	2	-	9	11	12	-	1
Viable pregnancies	24	23	-	17	1	-	7	10	9	-	-
Clinical pregnancies per 100 oocyte retrieval cycles	19.9	12.7	-	24.7	5.1	-	21.4	17.7	17.1	-	20.0
Viable pregnancies per 100 oocyte retrieval cycles	12.9	12.7	-	20.0	2.6	-	16.7	16.1	12.9	-	-

Stage of treatment	IVF unit							All units
	W	X	Y	Z	AA	AB	AC	
Cycles with oocyte retrieval	59	-	21	-	38	2	12	4,261
Cycles with embryo transfer	53	-	19	-	30	-	11	3,778
Clinical pregnancies	15	-	5	-	10	-	1	698
Viable pregnancies	14	-	4	-	7	-	1	560
Clinical pregnancies per 100 oocyte retrieval cycles	25.4	-	23.8	-	26.3	-	8.3	16.4
Viable pregnancies per 100 oocyte retrieval cycles	23.7	-	19.0	-	18.4	-	8.3	13.1

**Table 15. IVF pregnancies after embryo freezing but without microinsemination, numbers and pregnancy rates in each IVF unit, 1995**

Stage of treatment	IVF unit										
	A	B	C	D	E	F	G	H	I	J	K
Cycles with embryo transfer	1,043	224	193	311	188	318	288	280	112	199	71
Clinical pregnancies	156	30	29	51	22	45	50	45	28	26	9
Viable pregnancies	128	23	24	44	17	33	29	42	11	19	6
Clinical pregnancies per 100 embryo transfer cycles	15.0	13.4	15.0	16.4	11.7	14.2	17.4	16.1	25.0	13.1	12.7
Viable pregnancies per 100 embryo transfer cycles	12.3	10.3	12.4	14.1	9.0	10.4	10.1	15.0	9.8	9.5	8.5

Stage of treatment	IVF unit										
	L	M	N	O	P	Q	R	S	T	U	V
Cycles with embryo transfer	61	168	169	92	81	108	99	82	34	-	51
Clinical pregnancies	12	20	9	19	17	11	14	10	3	-	8
Viable pregnancies	5	20	6	18	9	8	10	9	3	-	8
Clinical pregnancies per 100 embryo transfer cycles	19.7	11.9	5.3	20.7	21.0	10.2	14.1	12.2	8.8	-	15.7
Viable pregnancies per 100 embryo transfer cycles	8.2	11.9	3.6	19.6	11.1	7.4	10.1	11.0	8.8	-	15.7

Stage of treatment	IVF unit							All units
	W	X	Y	Z	AA	AB	AC	
Cycles with embryo transfer	87	24	49	23	27	15	7	4,404
Clinical pregnancies	9	1	10	-	3	-	-	637
Viable pregnancies	6	-	8	-	1	-	-	487
Clinical pregnancies per 100 embryo transfer cycles	10.3	4.2	20.4	-	11.1	-	-	14.5
Viable pregnancies per 100 embryo transfer cycles	6.9	-	16.3	-	3.7	-	-	11.1



**Table 16. IVF pregnancies after microinsemination and embryo freezing, numbers and pregnancy rates in each IVF unit, 1995**

Stage of treatment	IVF unit										
	A	B	C	D	E	F	G	H	I	J	K
Cycles with embryo transfer	787	53	31	154	39	274	-	45	31	74	38
Clinical pregnancies	109	13	2	22	5	42	-	9	11	12	2
Viable pregnancies	91	11	2	17	4	32	-	8	8	9	1
Clinical pregnancies per 100 embryo transfer cycles	13.9	24.5	6.5	14.3	12.8	15.3	-	20.0	35.5	16.2	5.3
Viable pregnancies per 100 embryo transfer cycles	11.6	20.8	6.5	11.0	10.3	11.7	-	17.8	25.8	12.2	2.6

Stage of treatment	IVF unit										
	L	M	N	O	P	Q	R	S	T	U	V
Cycles with embryo transfer	53	95	-	16	3	22	8	-	9	-	1
Clinical pregnancies	5	9	-	6	2	2	1	-	-	-	-
Viable pregnancies	2	8	-	5	1	2	1	-	-	-	-
Clinical pregnancies per 100 embryo transfer cycles	9.4	9.5	-	37.5	66.7	9.1	12.5	-	-	-	-
Viable pregnancies per 100 embryo transfer cycles	3.8	8.4	-	31.3	33.3	9.1	12.5	-	-	-	-

Stage of treatment	IVF unit							All units
	W	X	Y	Z	AA	AB	AC	
Cycles with embryo transfer	20	-	16	9	14	-	2	1,794
Clinical pregnancies	2	-	6	-	2	-	-	262
Viable pregnancies	1	-	5	-	-	-	-	208
Clinical pregnancies per 100 embryo transfer cycles	10.0	-	37.5	-	14.3	-	-	14.6
Viable pregnancies per 100 embryo transfer cycles	5.0	-	31.3	-	-	-	-	11.6

**Table 17. IVF pregnancies after use of donor oocytes, numbers and pregnancy rates in each IVF unit, 1995**

Stage of treatment	IVF unit										
	A	B	C	D	E	F	G	H	I	J	K
Cycles with embryo transfer	60	97	25	42	4	26	-	20	51	7	25
Clinical pregnancies	14	17	5	7	1	4	-	5	9	2	6
Viable pregnancies	10	13	4	6	1	4	-	4	4	2	6
Clinical pregnancies per 100 embryo transfer cycles	23.3	17.5	20.0	16.7	25.0	15.4	-	25.0	17.6	28.6	24.0
Viable pregnancies per 100 embryo transfer cycles	16.7	13.4	16.0	14.3	25.0	15.4	-	20.0	7.8	28.6	24.0

Stage of treatment	IVF unit										
	L	M	N	O	P	Q	R	S	T	U	V
Cycles with embryo transfer	1	2	1	29	8	2	-	5	5	-	6
Clinical pregnancies	-	2	1	7	1	1	-	-	-	-	2
Viable pregnancies	-	2	1	2	1	1	-	-	-	-	2
Clinical pregnancies per 100 embryo transfer cycles	-	100.0	100.0	24.1	12.5	50.0	-	-	-	-	33.3
Viable pregnancies per 100 embryo transfer cycles	-	100.0	100.0	6.9	12.5	50.0	-	-	-	-	33.3

Stage of treatment	IVF unit							All units
	W	X	Y	Z	AA	AB	AC	
Cycles with embryo transfer	1	-	4	2	1	2	1	427
Clinical pregnancies	-	-	-	1	1	-	-	86
Viable pregnancies	-	-	-	1	1	-	-	65
Clinical pregnancies per 100 embryo transfer cycles	-	-	-	50.0	100.0	-	-	20.1
Viable pregnancies per 100 embryo transfer cycles	-	-	-	50.0	100.0	-	-	15.2

**Table 18. GIFT pregnancies, numbers and pregnancy rates in each IVF unit, 1995**

Stage of treatment	IVF unit										
	A	B	C	D	E	F	G	H	I	J	K
Treatment cycles commenced	11	458	740	95	281	7	261	173	214	19	12
Cycles with oocyte retrieval	11	331	646	90	260	5	244	137	209	12	12
· by ultrasound guidance	11	331	21	89	128	4	244	5	209	9	12
· by laparoscopy	-	-	625	1	132	1	-	132	-	3	-
Cycles with gamete transfer	11	321	639	89	255	5	223	131	200	12	12
Clinical pregnancies	1	87	201	32	78	-	60	33	52	5	4
Viable pregnancies	1	68	156	24	66	-	46	28	41	3	2
Clinical pregnancies per 100 oocyte retrieval cycles	9.1	26.3	31.1	35.6	30.0	-	24.6	24.1	24.9	41.7	33.3
Viable pregnancies per 100 oocyte retrieval cycles	9.1	20.5	24.1	26.7	25.4	-	18.9	20.4	19.6	25.0	16.7

Stage of treatment	IVF unit										
	L	M	N*	O	P	Q	R	S	T	U	V
Treatment cycles commenced	81	31	125	-	40	20	2	3	67	157	9
Cycles with oocyte retrieval	70	31	125	-	33	16	2	3	54	127	9
· by ultrasound guidance	8	31	125	-	-	-	2	-	54	127	9
· by laparoscopy	62	-	-	-	33	16	-	-	-	-	-
Cycles with gamete transfer	67	30	123	-	33	16	2	3	48	123	9
Clinical pregnancies	21	9	27	-	6	1	-	-	13	29	2
Viable pregnancies	16	9	20	-	5	-	-	-	-	17	2
Clinical pregnancies per 100 oocyte retrieval cycles	30.0	29.0	21.6	-	18.2	6.3	-	-	24.1	22.8	22.2
Viable pregnancies per 100 oocyte retrieval cycles	22.9	29.0	16.0	-	15.2	-	-	-	-	13.4	22.2

Stage of treatment	IVF unit							All units
	W	X	Y	Z	AA	AB	AC	
Treatment cycles commenced	1	-	4	9	-	-	24	2,844
Cycles with oocyte retrieval	1	-	4	9	-	-	21	2,462
· by ultrasound guidance	1	-	4	9	-	-	-	1,433
· by laparoscopy	-	-	-	-	-	-	21	1,026
Cycles with gamete transfer	1	-	4	9	-	-	21	2,387
Clinical pregnancies	-	-	1	-	-	-	4	666
Viable pregnancies	-	-	-	-	-	-	2	506
Clinical pregnancies per 100 oocyte retrieval cycles	-	-	25.0	-	-	-	19.0	27.1
Viable pregnancies per 100 oocyte retrieval cycles	-	-	-	-	-	-	9.5	20.6

\* 'Treatment cycles commenced' not given

**Table 19. Treatment related to embryo freezing in each IVF unit, 1995**

Stage of treatment	IVF unit										
	A	B	C	D	E	F	G	H	I	J	K
Patients having embryos frozen	859	461	280	685	247	375	158	290	n.a.	187	159
Embryos that were frozen	4,124	1,315	1,135	2,621	1,071	1,673	682	1,672	835	1,260	806
Embryos thawed	3,795	1,058	866	1,634	741	1,505	724	1,014	777	748	439
Patients receiving thawed embryos	1,027	271	208	530	123	626	288	244	n.a.	175	93
Embryos transferred after thawing	3,227	658	571	1,005	547	1,248	563	709	387	554	239
Frozen embryos in storage <sup>a</sup>	6,661	3,054	1,208	3,307	1,429	n.a.	n.a.	1,739	1,990	1,674	943

Stage of treatment	IVF unit										
	L	M	N	O	P	Q	R	S	T	U	V
Patients having embryos frozen	181	82	151	150	68	88	89	85	37	-	57
Embryos that were frozen	875	308	552	1,026	381	523	393	429	215	-	186
Embryos thawed	528	578	416	533	275	395	300	285	190	-	169
Patients receiving thawed embryos	121	177	162	131	64	86	102	61	43	-	51
Embryos transferred after thawing	286	454	292	361	207	304	248	199	88	-	105
Frozen embryos in storage <sup>a</sup>	819	1,146	1,113	1,190	437	837	405	560	n.a.	-	324

Stage of treatment	IVF unit							All units
	W	X	Y	Z	AA	AB	AC	
Patients having embryos frozen	70	23	46	21	19	16	28	4,912*
Embryos that were frozen	382	117	234	113	225	76	105	22,499*
Embryos thawed	485	89	168	142	137	61	38	17,313*
Patients receiving thawed embryos	118	23	49	34	41	15	9	4,872*
Embryos transferred after thawing	242	43	127	89	90	36	23	12,515*
Frozen embryos in storage <sup>a</sup>	520	147	196	171	337	87	181	30,475**

n.a. Not available

\* Excludes I

\*\* Excludes F, G, T

<sup>a</sup> 31 December, 1995

**Table 20: Numbers and outcomes of IVF pregnancies by year of conception, 1979-1994**

Outcome of pregnancy	Year of conception							
	1979-92		1993		1994		1979-94	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Spontaneous abortion	1,926	20.9	337	19.7	481	21.3	2,744	20.9
Termination of pregnancy	43	0.5	15	0.9	8	0.4	66	0.5
Ectopic pregnancy	546	5.9	67	3.9	76	3.4	689	5.2
Stillbirth	138	1.5	14	0.8	31	1.4	183	1.4
Live birth *	6,542	71.1	1,274	74.6	1,658	73.6	9,474	72.0
<b>All outcomes</b>	<b>9,195</b>	<b>100.0</b>	<b>1,707</b>	<b>100.0</b>	<b>2,254</b>	<b>100.0</b>	<b>13,156</b>	<b>100.0</b>

\* Multiple pregnancies with both stillbirths and live births are included only in the live birth category

**Table 21: Place of parental residence, IVF pregnancies, 1979-1994**

Place of usual residence	Number			Per cent		
	1979-92	1993	1994	1979-92	1993	1994
New South Wales	2,765	462	573	30.2	27.1	25.5
Victoria	2,316	515	769	25.3	30.2	34.2
Queensland	1,366	173	189	14.9	10.1	8.4
South Australia	1,063	218	316	11.6	12.8	14.0
Western Australia	775	137	165	8.5	8.0	7.3
Tasmania	195	27	33	2.1	1.6	1.5
Australian Capital Territory	81	15	15	0.9	0.9	0.7
Northern Territory	46	23	30	0.5	1.3	1.3
New Zealand	483	130	152	5.3	7.6	6.8
Other countries	52	7	9	0.6	0.4	0.4
Not stated	53	-	3			
<b>All regions</b>	<b>9,195</b>	<b>1,707</b>	<b>2,254</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 22: Maternal ages, IVF pregnancies, 1979-1994**

Age group (years)	Number			Per cent		
	1979-92	1993	1994	1979-92	1993	1994
Less than 20	2	1	-	0.0	0.1	-
20 - 24	205	35	50	2.2	2.1	2.2
25 - 29	2,327	357	459	25.3	20.9	20.4
30 - 34	4,012	730	971	43.7	42.8	43.1
35 - 39	2,318	479	622	25.2	28.1	27.6
40 - 44	304	101	140	3.3	5.9	6.2
45 and over	21	4	11	0.2	0.2	0.5
Not stated	6	-	1			
<b>All ages</b>	<b>9,195</b>	<b>1,707</b>	<b>2,254</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 23: Paternal ages, IVF pregnancies, 1979-1994**

Age group (years)	Number			Per cent		
	1979-92	1993	1994	1979-92	1993	1994
Less than 20	1	-	-	0.0	-	-
20 - 24	88	21	18	1.1	1.3	0.8
25 - 29	1,318	205	258	15.7	12.4	11.6
30 - 34	3,222	611	781	38.5	36.9	35.1
35 - 39	2,412	508	686	28.8	30.7	30.9
40 - 44	950	218	311	11.3	13.2	14.0
45 and over	387	92	169	4.6	5.6	7.6
Not stated	817	52	31			
<b>All ages</b>	<b>9,195</b>	<b>1,707</b>	<b>2,254</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 24: Previous pregnancies for pregnant women, IVF pregnancies, 1979-1994**

Number of previous pregnancies	Number				Per cent			
	1979-91	1992	1993	1994	1979-91	1992	1993	1994
None	3,669	629	736	1,070	49.0	42.9	45.7	48.8
One	2,024	448	470	608	27.0	30.6	29.2	27.7
Two	976	204	210	259	13.0	13.9	13.0	11.8
Three	485	108	108	147	6.5	7.4	6.7	6.7
Four or more	330	76	88	109	4.4	5.2	5.5	5.0
Not stated	198	48	95	61				
<b>All parities</b>	<b>7,682</b>	<b>1,513</b>	<b>1,707</b>	<b>2,254</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 25: Duration of infertility, IVF pregnancies, 1979-1994**

Duration of infertility (years)	Number			Per cent		
	1979-92	1993	1994	1979-92	1993	1994
Less than 2	289	83	126	3.3	5.0	5.7
2 - 3	2,563	583	840	29.6	35.5	38.3
4 - 5	2,516	484	628	29.1	29.4	28.6
6 - 7	1,526	232	291	17.6	14.1	13.3
8 - 9	795	123	160	9.2	7.5	7.3
10 or more	960	139	149	11.1	8.5	6.8
Not stated	546	63	60			
<b>All pregnancies</b>	<b>9,195</b>	<b>1,707</b>	<b>2,254</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 26: Outcome of pregnancy by duration of infertility, IVF pregnancies, 1994**

Outcome of pregnancy	Duration of infertility (years)					
	Less than 4		4 - 7		8 or more	
	Number	Per cent	Number	Per cent	Number	Per cent
Spontaneous abortion	200	20.7	192	20.9	75	24.3
Termination of pregnancy	5	0.5	2	0.2	1	0.3
Ectopic pregnancy	35	3.6	29	3.2	11	3.6
Stillbirth	14	1.4	14	1.5	3	1.0
Live birth *	712	73.7	682	74.2	219	70.9
<b>All outcomes</b>	<b>966</b>	<b>100.0</b>	<b>919</b>	<b>100.0</b>	<b>309</b>	<b>100.0</b>

\* Multiple pregnancies with both stillbirths and live births are included only in the live birth category

Note: The duration of infertility was not stated for 60 pregnancies in 1994

**Table 27: Causes of infertility, selected IVF cohorts, 1979-1994**

Causes of infertility	Number			Per cent		
	1979-92	1993	1994	1979-92	1993	1994
Tubal	3,802	538	524	41.4	31.5	23.3
Male factor	1,168	364	705	12.7	21.3	31.3
Endometriosis	520	111	115	5.7	6.5	5.1
Other stated causes	426	123	125	4.6	7.2	5.6
Multiple causes	2,339	398	567	25.5	23.3	25.2
Unexplained infertility	927	173	216	10.1	10.1	9.6
Not stated	13	-	2			
<b>All causes</b>	<b>9,195</b>	<b>1,707</b>	<b>2,254</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 28: Outcome of IVF pregnancies by causes of infertility, 1994**

Outcome of pregnancy	Causes of infertility					
	Tubal	Male	Endometriosis	Multiple	Unexplained	All causes*
	<b>Number</b>					
Spontaneous abortion	114	132	23	132	45	481
Termination of pregnancy	1	3	-	3	1	8
Ectopic pregnancy	27	15	4	18	5	76
Stillbirth	5	7	2	13	3	31
Live birth	377	548	86	401	162	1,658
<b>All outcomes</b>	<b>524</b>	<b>705</b>	<b>115</b>	<b>567</b>	<b>216</b>	<b>2,254</b>
	<b>Per cent</b>					
Spontaneous abortion	21.8	18.7	20.0	23.3	20.8	21.3
Termination of pregnancy	0.2	0.4	-	0.5	0.5	0.4
Ectopic pregnancy	5.2	2.1	3.5	3.2	2.3	3.4
Stillbirth	1.0	1.0	1.7	2.3	1.4	1.4
Live birth	71.9	77.7	74.8	70.7	75.0	73.6
<b>All outcomes</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

\* Includes 127 pregnancies with 'other' or 'not stated' causes of infertility



**Table 29: Drugs used to stimulate ovulation, IVF pregnancies, 1979-1994**

Drugs	Number			Per cent		
	1979-92	1993	1994	1979-92	1993	1994
Natural cycles	33	11	9	0.4	0.7	0.4
Clomiphene and hMG or FSH	5,430	207	161	63.5	13.1	7.6
hMG or FSH	168	16	13	2.0	1.0	0.6
GnRH analogues and hMG or FSH	2,868	1,347	1,939	33.5	85.2	91.4
Other	50	-	-	0.6	-	-
Not stated	646	126	132			
<b>All drugs</b>	<b>9,195</b>	<b>1,707</b>	<b>2,254</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 30: IVF treatment cycle in which conception occurred, 1979-1994**

Treatment cycle	Number			Per cent		
	1979-92	1993	1994	1979-92	1993	1994
1	3,747	699	926	43.2	43.8	43.3
2	2,134	373	501	24.6	23.4	23.4
3	1,193	239	302	13.8	15.0	14.1
4	670	114	182	7.7	7.1	8.5
5 or more	931	171	226	10.7	10.7	10.6
Not stated	520	111	117			
<b>All cycles</b>	<b>9,195</b>	<b>1,707</b>	<b>2,254</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 31: Number of oocytes collected by laparoscopy or ultrasound guidance, IVF pregnancies, 1979-1994**

Number of oocytes collected	1979-92		1993		1994	
	Number	Per cent	Number	Per cent	Number	Per cent
1	159	1.9	22	1.4	33	1.6
2	481	5.7	38	2.4	32	1.5
3	750	8.9	47	3.0	81	3.9
4	958	11.3	87	5.6	84	4.0
5	1,011	12.0	92	5.9	134	6.4
6	925	11.0	112	7.2	154	7.4
7	731	8.7	109	7.0	160	7.7
8 or more	3,432	40.6	1,056	67.6	1,409	67.5
Not stated	748		144		167	
<b>All pregnancies</b>	<b>9,195</b>	<b>100.0</b>	<b>1,707</b>	<b>100.0</b>	<b>2,254</b>	<b>100.0</b>
Mean number of oocytes	6.5*		11.1		11.4	

\* Data include 1987-1992

**Table 32: Number of embryos transferred, IVF pregnancies, 1979-1994**

Number of embryos transferred	Number			Per cent		
	1979-92	1993	1994	1979-92	1993	1994
1	703	135	176	7.7	7.9	7.9
2	2,485	733	1,052	27.4	43.0	47.1
3	4,056	805	977	44.7	47.3	43.7
4	1,671	28	25	18.4	1.6	1.1
5 or more	158	2	4	1.7	0.1	0.2
Not stated	122	4	20			
<b>All pregnancies</b>	<b>9,195</b>	<b>1,707</b>	<b>2,254</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Mean number of embryos	2.8	2.4	2.4			

**Table 33: Outcome of IVF pregnancies by number of embryos transferred, 1994**

Outcome of pregnancy	Number of embryos transferred					All** pregnancies
	1	2	3	4	5+	
	<b>Number</b>					
Spontaneous abortion	38	215	213	10	1	481
Termination of pregnancy	2	4	2	-	-	8
Ectopic pregnancy	3	31	40	2	-	76
Stillbirth	-	18	13	-	-	31
Live birth *	133	784	709	13	3	1,658
<b>All outcomes</b>	<b>176</b>	<b>1,052</b>	<b>977</b>	<b>25</b>	<b>4</b>	<b>2,254</b>
	<b>Per cent</b>					
Spontaneous abortion	21.6	20.4	21.8	40.0	25.0	21.3
Termination of pregnancy	1.1	0.4	0.2	-	-	0.4
Ectopic pregnancy	1.7	2.9	4.1	8.0	-	3.4
Stillbirth	-	1.7	1.3	-	-	1.4
Live birth *	75.6	74.5	72.6	52.0	75.0	73.6
<b>All outcomes</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

\* Multiple pregnancies with both stillbirths and live births are included only in the live birth category

\*\* Includes 20 pregnancies in which the number of embryos transferred was not stated

**Table 34: Number of IVF pregnancies following donor oocytes, sperm or embryos, and frozen embryos or oocytes, 1979-1994**

Type of pregnancy	1979-91	1992	1993	1994	1979-94
Donor oocytes	176	51	69	62	358
Donor sperm	695	151	144	144	1,134
Donor embryos	9	2	9	8	28
Frozen embryos	947	530	603	786	2,866
Frozen oocytes	4	-	-	-	4

**Table 35: Outcome of pregnancy after use of donor gametes, donor or frozen embryos, IVF pregnancies, 1979-1994**

Outcome of pregnancy	Donor sperm		Donor oocytes		Donor embryos		Frozen embryos	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Spontaneous abortion	210	18.5	85	23.7	10	35.7	530	18.5
Termination of pregnancy	5	0.4	4	1.1	-	-	19	0.7
Ectopic pregnancy	43	3.8	10	2.8	2	7.1	102	3.6
Stillbirth	22	1.9	2	0.6	-	-	30	1.0
Live birth *	854	75.3	257	71.8	16	57.1	2,185	76.2
<b>All outcomes</b>	<b>1,134</b>	<b>100.0</b>	<b>358</b>	<b>100.0</b>	<b>28</b>	<b>100.0</b>	<b>2,866</b>	<b>100.0</b>

\* Multiple pregnancies with both stillbirths and live births are included only in the live birth category

**Table 36: Number and outcome of pregnancies after microinsemination, 1990-1994**

Outcome of pregnancy	Year of conception							
	1990-92		1993		1994		1990-94	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Spontaneous abortion	27	25.2	24	17.6	105	19.1	156	19.7
Termination of pregnancy	2	1.9	-	-	3	0.5	5	0.6
Ectopic pregnancy	4	3.7	2	1.5	12	2.2	18	2.3
Stillbirth	1	0.9	1	0.7	8	1.5	10	1.3
Live birth *	73	68.2	109	80.1	422	76.7	604	76.2
<b>All outcomes</b>	<b>107</b>	<b>100.0</b>	<b>136</b>	<b>100.0</b>	<b>550</b>	<b>100.0</b>	<b>793</b>	<b>100.0</b>

\* Multiple pregnancies with both stillbirths and live births are included only in the live birth category

**Table 37: Drugs used in luteal phase after embryo transfer, IVF pregnancies, 1979-1994**

Drugs	Number			Per cent		
	1979-92	1993	1994	1979-92	1993	1994
Proluton	243	4	6	2.7	0.2	0.3
Human chorionic gonadotrophin (hCG)	4,272	834	1,132	47.4	48.9	50.5
Human chorionic gonadotrophin / Proluton	427	57	61	4.7	3.3	2.7
Progestagen	1,005	416	573	11.1	24.4	25.6
Other drugs	81	2	1	0.9	0.1	0.0
None	2,988	391	467	33.1	22.9	20.8
Not stated	179	3	14			
<b>All pregnancies</b>	<b>9,195</b>	<b>1,707</b>	<b>2,254</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 38: Outcome of pregnancy in maternal age groups, IVF pregnancies, 1979-1994**

Outcome of pregnancy	Maternal age (years)					All ages*
	Less than 25	25 - 29	30 - 34	35 - 39	40 and over	
	<b>Number</b>					
Spontaneous abortion	46	582	1,033	857	221	2,744
Termination of pregnancy	1	15	22	17	11	66
Ectopic pregnancy	18	178	312	155	26	689
Stillbirth	3	40	81	52	7	183
Live birth	225	2,328	4,265	2,338	316	9,474
<b>All outcomes</b>	<b>293</b>	<b>3,143</b>	<b>5,713</b>	<b>3,419</b>	<b>581</b>	<b>13,156</b>
	<b>Per cent</b>					
Spontaneous abortion	15.7	18.5	18.1	25.1	38.0	20.9
Termination of pregnancy	0.3	0.5	0.4	0.5	1.9	0.5
Ectopic pregnancy	6.1	5.7	5.5	4.5	4.5	5.2
Stillbirth	1.0	1.3	1.4	1.5	1.2	1.4
Live birth	76.8	74.1	74.7	68.4	54.4	72.0
<b>All outcomes</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

\* Includes 7 pregnancies in which maternal age was not stated

*Spontaneous abortions, IVF pregnancies, 1979-1994*

Pregnancy	1979-91	1992	1993	1994	1979-94
Spontaneous abortions	1,612	314	337	481	2,744
IVF pregnancies	124	14	14	31	183
Total	5,438	1,104	1,274	1,658	9,474
Total births	7,174	1,432	1,625	2,170	12,401
Spontaneous abortion rate (%)	22.5	21.9	20.7	22.2	22.1

*Prevalence of spontaneous abortions in maternal age groups, IVF pregnancies, 1979-1994*

Age (years)	Number of IVF pregnancies *	Spontaneous abortions	
		Number	Per cent
15-19	275	46	16.7
20-24	2,952	582	19.7
25-29	5,383	1,033	19.2
30-34	3,251	857	26.4
35-39	511	205	40.1
40-44	35	16	45.7
45-49	7	5	
Total	12,414	2,744	22.1

*Spontaneous abortions and pregnancies of at least 20 weeks' gestation*

*Spontaneous abortions after IVF, 1979-1994*

Year	1979-91	1992	1993	1994	1979-94
Number of IVF pregnancies	472	74	67	76	6
Number of spontaneous abortions	7,682	1,513	1,707	2,254	13,156
Spontaneous abortion rate (%)	6.1	4.9	3.9	3.0	1.2
Total births	7,210	1,439	1,640	2,170	12,459
Spontaneous abortion rate (per 100 IVF pregnancies)	1:15.3	1:19.4	1:24.5	1:2	1:18.1

*Figures in parentheses: total abortions and births*

**Table 42: Reported complications of pregnancy, IVF pregnancies, 1990-1994**

Pregnancy complications	Number			Per cent		
	1990-92	1993	1994	1990-92	1993	1994
None	2,011	811	1,162	65.4	63.7	66.1
Threatened abortion	201	86	78	6.5	6.8	4.4
Antepartum haemorrhage	50	17	29	1.6	1.3	1.7
Pregnancy-induced hypertension	153	107	128	5.0	8.4	7.3
Placenta praevia	43	17	13	1.4	1.3	0.7
Other complications	615	236	347	20.0	18.5	19.7
Not stated	991	433	497			
<b>All pregnancies</b>	<b>4,064</b>	<b>1,707</b>	<b>2,254</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 43: Duration of singleton and multiple IVF pregnancies of at least 20 weeks' gestation, 1994**

Gestational age (weeks)	Singleton		Twin		Triplet		All pregnancies*	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
20 - 23	17	1.2	7	2.7	3	11.1	27	1.6
24 - 27	11	0.8	8	3.1	2	7.4	21	1.2
28 - 31	19	1.4	20	7.8	8	29.6	48	2.8
32 - 36	134	9.5	108	42.2	14	51.9	256	15.2
37 - 41	1,201	85.5	113	44.1	-	-	1,314	77.8
42 or more	22	1.6	-	-	-	-	22	1.3
20 - 36	181	12.9	143	55.9	27	100.0	352	20.9
Not stated	2		-		-		2	
<b>All gestational ages</b>	<b>1,406</b>	<b>100.0</b>	<b>256</b>	<b>100.0</b>	<b>27</b>	<b>100.0</b>	<b>1,690</b>	<b>100.0</b>

\* Includes 1 quadruplet pregnancy

**Table 44: Duration of singleton and multiple IVF pregnancies of at least 20 weeks' gestation after microinsemination, 1990-1994**

Gestational age (weeks)	Singleton		Twin		Triplet		All pregnancies*	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
20 - 23	4	0.8	3	3.3	1	11.1	8	1.3
24 - 27	2	0.4	3	3.3	1	11.1	6	1.0
28 - 31	9	1.8	2	2.2	1	11.1	13	2.1
32 - 36	46	9.0	34	37.8	6	66.7	86	14.0
37 - 41	442	86.2	48	53.3	-	-	490	79.9
42 or more	10	1.9	-	-	-	-	10	1.6
20 - 36	61	11.9	42	46.7	9	100.0	113	18.4
Not stated	1		-		-		1	
<b>All gestational ages</b>	<b>514</b>	<b>100.0</b>	<b>90</b>	<b>100.0</b>	<b>9</b>	<b>100.0</b>	<b>614</b>	<b>100.0</b>

\* Includes 1 quadruplet pregnancy

**Table 45: Duration of pregnancy of singleton IVF births after use of donor sperm, donor oocytes or frozen embryos, 1994**

Gestational age (weeks)	Donor sperm		Donor oocytes		Frozen embryos	
	Number	Per cent	Number	Per cent	Number	Per cent
20 - 27	3	3.3	2	5.7	8	1.5
28 - 31	3	3.3	-	-	7	1.3
32 - 36	9	9.8	3	8.6	58	11.0
37 - 41	76	82.6	30	85.7	447	84.7
42 or more	1	1.1	-	-	8	1.5
<b>All gestational ages</b>	<b>92</b>	<b>100.0</b>	<b>35</b>	<b>100.0</b>	<b>528</b>	<b>100.0</b>

**Table 46: Maternal age and duration of singleton IVF pregnancies of at least 20 weeks' gestation, 1994**

Gestational age (weeks)	Maternal age (years)					All ages
	Less than 25	25 - 29	30 - 34	35 - 39	40 and over	
	<b>Number</b>					
20 - 27	1	7	6	9	4	27
28 - 31	1	5	9	4	-	19
32 - 36	1	19	61	42	11	134
37 or more	27	266	546	321	63	1,223
Not stated	-	1	-	1	-	2
<b>All gestational ages</b>	<b>30</b>	<b>298</b>	<b>622</b>	<b>377</b>	<b>78</b>	<b>1,405</b>
20 - 36	3	31	76	55	15	180
	<b>Per cent</b>					
20 - 27	3.3	2.4	1.0	2.4	5.1	1.9
28 - 31	3.3	1.7	1.4	1.1	-	1.4
32 - 36	3.3	6.4	9.8	11.2	14.1	9.6
37 or more	90.0	89.6	87.8	85.4	80.8	87.2
<b>All gestational ages</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
20 - 36	10.0	10.4	12.2	14.6	19.2	12.8

**Table 47: Causes of infertility and duration of singleton IVF pregnancies of at least 20 weeks' gestation, 1994**

Gestational age (weeks)	Causes of infertility					All causes*
	Tubal	Male	Endometriosis	Multiple	Unexplained	
	<b>Number</b>					
20 - 27	8	4	3	9	2	27
28 - 31	5	8	1	5	-	19
32 - 36	40	30	9	33	13	134
37 - or more	258	432	64	296	116	1,223
Not stated	1	1	-	-	-	2
<b>All gestational ages</b>	<b>312</b>	<b>475</b>	<b>77</b>	<b>343</b>	<b>131</b>	<b>1,405</b>
20 - 36	53	42	13	47	15	180
	<b>Per cent</b>					
20 - 27	2.6	0.8	3.9	2.6	1.5	1.9
28 - 31	1.6	1.7	1.3	1.5	-	1.4
32 - 36	12.9	6.3	11.7	9.6	9.9	9.6
37 - or more	83.0	91.1	83.1	86.3	88.5	87.2
<b>All gestational ages</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
20 - 36	17.0	8.9	16.9	13.7	11.5	12.8

\* Includes 67 pregnancies with 'other' or 'not stated' causes of infertility



**Table 48: Plurality of IVF pregnancies of at least 20 weeks' gestation, 1979-1994**

Plurality	Number			Per cent		
	1979-92	1993	1994	1979-92	1993	1994
Singletons	5,306	1,069	1,406	79.3	82.7	83.2
Twins	1,193	203	256	17.8	15.7	15.1
Triplets	180	19	27	2.7	1.5	1.6
Quadruplets	8	1	1	0.1	0.1	0.1
Quintuplets	1	-	-	0.0	-	-
<b>All pregnancies</b>	<b>6,688</b>	<b>1,292</b>	<b>1,690</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 49: Plurality of IVF pregnancies of at least 20 weeks' gestation and number of embryos transferred, 1994**

Number of embryos transferred	Plurality							
	Singleton		Twin		Triplet		All pregnancies*	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
1	133	100.0	-	-	-	-	133	100.0
2	694	86.5	107	13.3	1	0.1	802	100.0
3	553	76.5	143	19.8	26	3.6	723	100.0
4	10	76.9	3	23.1	-	-	13	100.0
5 or more	3	100.0	-	-	-	-	3	100.0
Not stated	13		3		-		16	
<b>All pregnancies</b>	<b>1,406</b>	<b>83.2</b>	<b>256</b>	<b>15.1</b>	<b>27</b>	<b>1.6</b>	<b>1,690</b>	<b>100.0</b>

\* Includes 1 quadruplet pregnancy

**Table 50: Method of delivery for singleton and multiple IVF pregnancies of at least 20 weeks' gestation, 1994**

Plurality	Method of delivery					
	Vaginal		Caesarean section		All methods*	
	Number	Per cent	Number	Per cent	Number	
Singleton	910	65.2	486	34.8	1,406	
Twin	101	39.8	153	60.2	256	
Triplet	4	14.8	23	85.2	27	
Quadruplet	-	0.0	1	100.0	1	
<b>All pregnancies</b>	<b>1,015</b>	<b>60.5</b>	<b>663</b>	<b>39.5</b>	<b>1,690</b>	

\* Includes 12 pregnancies in which the method of delivery was not stated

**Table 51: Sex of infants in singleton and multiple IVF births of at least 20 weeks' gestation, selected conception cohorts, 1979-1994**

Plurality	Male			Female			Sex ratio (M:F)		
	1979-92	1993	1994	1979-92	1993	1994	1979-92	1993	1994
Singletons	2,722	566	728	2,551	497	673	106.7	113.9	108.2
Twins	1,239	210	263	1,133	192	248	109.4	109.4	106.0
Triplets	276	28	37	258	29	44	107.0	96.6	84.1
Quadruplets	18	3	2	14	1	2	128.6	300.0	100.0
Quintuplets	1	-	-	4	-	-	25.0	-	-
<b>All births</b>	<b>4,256</b>	<b>807</b>	<b>1,030</b>	<b>3,960</b>	<b>719</b>	<b>967</b>	<b>107.5</b>	<b>112.2</b>	<b>106.5</b>

Note: Infant's sex was not stated for 70 births

**Table 52: Birthweight of IVF live births and stillbirths, 1994**

Birthweight (g)	Live births		Stillbirths		All births	
	Number	Per cent	Number	Per cent	Number	Per cent
Less than 500	9	0.5	15	42.9	24	1.2
500 - 999	39	2.0	9	25.7	48	2.4
1000 - 1499	76	3.9	5	14.3	81	4.1
1500 - 1999	104	5.3	1	2.9	105	5.3
2000 - 2499	216	11.1	-	0.0	216	10.9
2500 - 2999	457	23.5	1	2.9	458	23.1
3000 - 3499	548	28.1	4	11.4	552	27.9
3500 - 3999	364	18.7	-	0.0	364	18.4
4000 and over	134	6.9	-	0.0	134	6.8
Not stated	4		17		21	
<b>All birthweights</b>	<b>1,951</b>	<b>100.0</b>	<b>52</b>	<b>100.0</b>	<b>2,003</b>	<b>100.0</b>
Mean birthweight (g)	2,959		999		2,925	

**Table 53: Birthweight of infants in singleton and multiple IVF births of at least 20 weeks' gestation, 1994**

Birthweight (g)	Singleton		Twin		Triplet		All births*	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Less than 500	7	0.5	8	1.6	9	11.1	24	1.2
500 - 999	19	1.4	22	4.4	7	8.6	48	2.4
1000 - 1499	11	0.8	40	7.9	26	32.1	81	4.1
1500 - 1999	21	1.5	62	12.3	22	27.2	105	5.3
2000 - 2499	76	5.5	128	25.3	12	14.8	216	10.9
2500 - 2999	280	20.1	173	34.3	5	6.2	458	23.1
3000 - 3499	487	35.0	65	12.9	-	-	552	27.9
3500 - 3999	358	25.7	6	1.2	-	-	364	18.4
4000 and over	133	9.6	1	0.2	-	-	134	6.8
Less than 2500	134	9.6	260	51.5	76	93.8	474	23.9
Not stated	14		7		-		21	
<b>All birthweights</b>	<b>1,406</b>	<b>100.0</b>	<b>512</b>	<b>100.0</b>	<b>81</b>	<b>100.0</b>	<b>2,004</b>	<b>100.0</b>
Mean birthweight (g)	3,232		2,319		1,507		2,925	

\* Includes 4 quadruplet births

**Table 54: Birthweight of infants in singleton and multiple births of at least 20 weeks' gestation after microinsemination, 1990-1994**

Birthweight (g)	Singleton		Twin		Triplet		All births*	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Less than 500	1	0.2	1	0.6	3	11.1	5	0.7
500 - 999	3	0.6	10	5.6	1	3.7	14	2.0
1000 - 1499	4	0.8	6	3.4	6	22.2	20	2.8
1500 - 1999	14	2.8	21	11.8	9	33.3	44	6.1
2000 - 2499	34	6.7	46	25.8	8	29.6	88	12.3
2500 - 2999	91	17.9	63	35.4	-	-	154	21.5
3000 - 3499	192	37.8	29	16.3	-	-	221	30.8
3500 - 3999	124	24.4	2	1.1	-	-	126	17.6
4000 and over	45	8.9	-	-	-	-	45	6.3
Less than 2500	56	11.0	84	47.2	27	100.0	171	23.8
Not stated	6		1		-		7	
<b>All birthweights</b>	<b>514</b>	<b>100.0</b>	<b>179</b>	<b>100.0</b>	<b>27</b>	<b>100.0</b>	<b>724</b>	<b>100.0</b>
Mean birthweight (g)	3,230		2,399		1,598		2,951	

\* Includes 4 quadruplet births

**Table 55: Birthweight of infants in singleton IVF pregnancies after use of donor sperm, donor oocytes or frozen embryos, 1979-1994**

Birthweight (g)	Donor sperm		Donor oocytes		Frozen embryos	
	Number	Per cent	Number	Per cent	Number	Per cent
Less than 500	6	0.9	2	0.9	8	0.4
500 - 999	7	1.0	4	1.8	24	1.3
1000 - 1499	9	1.3	5	2.2	12	0.6
1500 - 1999	11	1.6	6	2.7	38	2.0
2000 - 2499	42	6.1	17	7.6	75	3.9
2500 or more	609	89.0	190	84.8	1,746	91.7
Not stated	9		3		27	
Less than 2500	75	11.0	34	15.2	157	8.3
<b>All birthweights</b>	<b>693</b>	<b>100.0</b>	<b>227</b>	<b>100.0</b>	<b>1,930</b>	<b>100.0</b>
Mean birthweight (g)	3,227		3,185		3,325	

**Table 56: Outcome of infants in singleton and multiple IVF births of at least 20 weeks' gestation, 1994**

Outcome	Singleton	Twin	Triplet	Quadruplet	All births
Live births	1,379	492	76	4	1,951
Stillbirths	27	20	5	-	52
<b>Total births</b>	<b>1,406</b>	<b>512</b>	<b>81</b>	<b>4</b>	<b>2,003</b>
Neonatal deaths	8	15	6	-	29
Perinatal deaths	35	35	11	-	81
Stillbirth rate per 1,000 total births	19.2	39.1	61.7	-	26.0
Neonatal death rate per 1,000 live births	5.8	30.5	78.9	-	14.9
Perinatal mortality rate per 1,000 total births	24.9	68.4	135.8	-	40.4

**Table 57: Major congenital malformations in singleton and multiple IVF births of at least 20 weeks' gestation, 1979-1994**

Outcome	Singleton	Multiple	All births*
Total births	7,814	4,027	11,842
Congenital malformations			
- number	227	76	304
- rate (per cent)	2.9	1.9	2.6

\* Includes 36 abortions for fetal abnormality at gestational ages of at least 16 weeks

**Table 58: Numbers and outcomes of completed GIFT pregnancies by year of conception, 1985-1994**

Outcome of pregnancy	Year of conception							
	1985-92		1993		1994		1985-94	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Spontaneous abortion	1,083	21.3	189	18.5	177	20.4	1,449	20.8
Termination of pregnancy	26	0.5	7	0.7	3	0.3	36	0.5
Ectopic pregnancy	203	4.0	32	3.1	22	2.5	257	3.7
Stillbirth	60	1.2	4	0.4	13	1.5	77	1.1
Live birth *	3,715	73.0	790	77.3	653	75.2	5,158	73.9
<b>All outcomes</b>	<b>5,087</b>	<b>100.0</b>	<b>1,022</b>	<b>100.0</b>	<b>868</b>	<b>100.0</b>	<b>6,977</b>	<b>100.0</b>

\* Multiple pregnancies with both stillbirths and live births are included only in the live birth category

**Table 59: Place of parental residence, GIFT pregnancies, 1985-1994**

Place of usual residence	Number			Per cent		
	1985-92	1993	1994	1985-92	1993	1994
New South Wales	1,676	288	269	33.0	28.2	31.0
Victoria	980	281	195	19.3	27.5	22.5
Queensland	1,286	360	305	25.3	35.2	35.1
South Australia	411	27	16	8.1	2.6	1.8
Western Australia	536	45	62	10.6	4.4	7.1
Tasmania	20	5	4	0.4	0.5	0.5
Australian Capital Territory	37	5	5	0.7	0.5	0.6
Northern Territory	13	3	1	0.3	0.3	0.1
New Zealand	96	5	8	1.9	0.5	0.9
Other countries	21	3	3	0.4	0.3	0.3
Not stated	11	-	-			
<b>All regions</b>	<b>5,087</b>	<b>1,022</b>	<b>868</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 60: Maternal ages, GIFT pregnancies, 1985-1994**

Age group (years)	Number			Per cent		
	1985-92	1993	1994	1985-92	1993	1994
Less than 20	-	-	-	-	-	-
20 - 24	135	25	25	2.7	2.4	2.9
25 - 29	1,259	250	207	24.8	24.5	23.9
30 - 34	2,204	437	369	43.3	42.8	42.6
35 - 39	1,267	260	204	24.9	25.4	23.5
40 - 44	216	43	57	4.2	4.2	6.6
45 and over	5	7	5	0.1	0.7	0.6
Not stated	1	-	1			
<b>All ages</b>	<b>5,087</b>	<b>1,022</b>	<b>868</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 61: Paternal ages, GIFT pregnancies, 1985-1994**

Age group (years)	Number			Per cent		
	1985-92	1993	1994	1985-92	1993	1994
Less than 20	2	-	-	0.0	-	-
20 - 24	27	6	3	0.6	0.6	0.3
25 - 29	674	149	133	14.1	14.8	15.4
30 - 34	1,830	404	320	38.2	40.2	37.1
35 - 39	1,414	259	230	29.5	25.8	26.7
40 - 44	576	113	120	12.0	11.2	13.9
45 and over	263	74	56	5.5	7.4	6.5
Not stated	301	17	6			
<b>All ages</b>	<b>5,087</b>	<b>1,022</b>	<b>868</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 62: Previous pregnancies for pregnant women, GIFT pregnancies, 1985-1994**

Number of previous pregnancies	Number				Per cent			
	1985-91	1992	1993	1994	1985-91	1992	1993	1994
None	2,227	511	506	460	56.0	50.2	51.8	54.1
One	1,188	345	307	238	29.9	33.9	31.4	28.0
Two	368	100	112	92	9.3	9.8	11.5	10.8
Three	119	43	35	40	3.0	4.2	3.6	4.7
Four or more	73	19	17	20	1.8	1.9	1.7	2.4
Not stated	76	18	45	18				
<b>All parities</b>	<b>4,051</b>	<b>1,036</b>	<b>1,022</b>	<b>868</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 63: Duration of infertility, GIFT pregnancies, 1985-1994**

Duration of infertility (years)	Number			Per cent		
	1985-92	1993	1994	1985-92	1993	1994
Less than 2	293	99	57	6.1	9.9	6.7
2 - 3	1,866	457	405	38.6	45.9	47.9
4 - 5	1,277	245	233	26.4	24.6	27.6
6 - 7	685	101	87	14.2	10.2	10.3
8 - 9	391	32	31	8.1	3.2	3.7
10 or more	325	61	32	6.7	6.1	3.8
Not stated	250	27	23			
<b>All pregnancies</b>	<b>5,087</b>	<b>1,022</b>	<b>868</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 64: Outcome of pregnancy by duration of infertility, GIFT pregnancies, 1994**

Outcome of pregnancy	Duration of infertility (years)					
	Less than 4		4 - 7		8 or more	
	Number	Per cent	Number	Per cent	Number	Per cent
Spontaneous abortion	78	16.9	75	23.4	16	25.4
Termination of pregnancy	1	0.2	1	0.3	1	1.6
Ectopic pregnancy	14	3.0	8	2.5	-	-
Stillbirth	8	1.7	4	1.3	1	1.6
Live birth *	361	78.1	232	72.5	45	71.4
<b>All outcomes</b>	<b>462</b>	<b>100.0</b>	<b>320</b>	<b>100.0</b>	<b>63</b>	<b>100.0</b>

\* Multiple pregnancies with both stillbirths and live births are included only in the live birth category

Note: The duration of infertility was not stated for 23 pregnancies in 1994

**Table 65: Causes of infertility, selected GIFT cohorts, 1985-1994**

Causes of infertility	Number			Per cent		
	1985-92	1993	1994	1985-92	1993	1994
Tubal	282	40	32	5.6	3.9	3.7
Male factor	1,017	265	187	20.0	25.9	21.6
Endometriosis	734	150	132	14.5	14.7	15.2
Other stated causes	382	93	88	7.5	9.1	10.1
Multiple causes	1,140	217	190	22.5	21.2	21.9
Unexplained infertility	1,522	257	238	30.0	25.1	27.5
Not stated	10	-	1			
<b>All causes</b>	<b>5,087</b>	<b>1,022</b>	<b>868</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 66: Outcome of GIFT pregnancies by causes of infertility, 1994**

Outcome of pregnancy	Causes of infertility					
	Tubal	Male	Endometriosis	Multiple	Unexplained	All causes*
	<b>Number</b>					
Spontaneous abortion	6	37	23	40	55	177
Termination of pregnancy	-	-	-	2	1	3
Ectopic pregnancy	2	4	5	5	5	22
Stillbirth	1	3	1	1	6	13
Live birth	23	143	103	142	171	653
<b>All outcomes</b>	<b>32</b>	<b>187</b>	<b>132</b>	<b>190</b>	<b>238</b>	<b>868</b>
	<b>Per cent</b>					
Spontaneous abortion	18.8	19.8	17.4	21.1	23.1	20.4
Termination of pregnancy	-	-	-	1.1	0.4	0.3
Ectopic pregnancy	6.3	2.1	3.8	2.6	2.1	2.5
Stillbirth	3.1	1.6	0.8	0.5	2.5	1.5
Live birth	71.9	76.5	78.0	74.7	71.8	75.2
<b>All outcomes</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

\* Includes 89 pregnancies with 'other' or 'not stated' causes of infertility



**Table 67: Drugs used to stimulate ovulation, GIFT pregnancies, 1985-1994**

Drugs	Number			Per cent		
	1985-92	1993	1994	1985-92	1993	1994
Natural cycles	6	1	-	0.1	0.1	-
Clomiphene and hMG or FSH	2,599	118	69	51.5	11.7	8.1
hMG or FSH	131	12	7	2.6	1.2	0.8
GnRH analogues and hMG or FSH	2,299	877	776	45.6	87.0	91.1
Other	11	-	-	0.2	-	-
Not stated	41	14	16			
<b>All drugs</b>	<b>5,087</b>	<b>1,022</b>	<b>868</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 68: GIFT treatment cycle in which conception occurred, 1985-1994**

Treatment cycle	Number			Per cent		
	1985-92	1993	1994	1985-92	1993	1994
1	2,308	480	430	45.9	47.6	50.8
2	1,289	234	218	25.6	23.2	25.7
3	664	139	92	13.2	13.8	10.9
4	340	71	52	6.8	7.0	6.1
5 or more	432	84	55	8.6	8.3	6.5
Not stated	54	14	21			
<b>All cycles</b>	<b>5,087</b>	<b>1,022</b>	<b>868</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 69: Number of oocytes collected by laparoscopy or ultrasound guidance, GIFT pregnancies, 1985-1994**

Number of oocytes collected	1985-92		1993		1994	
	Number	Per cent	Number	Per cent	Number	Per cent
1	55	1.1	13	1.3	11	1.3
2	185	3.7	39	3.9	35	4.2
3	513	10.2	80	8.0	74	8.8
4	610	12.1	72	7.2	72	8.6
5	611	12.2	101	10.0	81	9.6
6	589	11.7	71	7.1	85	10.1
7	498	9.9	110	10.9	79	9.4
8 or more	1,962	39.1	520	51.7	405	48.1
Not stated	64		16		26	
<b>All pregnancies</b>	<b>5,087</b>	<b>100.0</b>	<b>1,022</b>	<b>100.0</b>	<b>868</b>	<b>100.0</b>
Mean number of oocytes	7.0*		8.5		8.2	

\* Data include 1987-1992

**Table 70: Number of oocytes transferred, GIFT pregnancies, 1985-1994**

Number of oocytes transferred	Number			Per cent		
	1985-92	1993	1994	1985-92	1993	1994
1	73	16	13	1.5	1.6	1.5
2	689	272	270	13.7	26.7	31.5
3	2,673	688	536	53.1	67.5	62.5
4	1,448	40	39	28.8	3.9	4.5
5 or more	150	3	-	3.0	0.3	-
Not stated	54	3	10			
<b>All pregnancies</b>	<b>5,087</b>	<b>1,022</b>	<b>868</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Mean number of oocytes	3.2	2.7	2.7			

**Table 71: Outcome of GIFT pregnancies by number of oocytes transferred, 1994**

Outcome of pregnancy	Number of oocytes transferred					All** pregnancies
	1	2	3	4	5+	
	<b>Number</b>					
Spontaneous abortion	2	56	110	9	-	177
Termination of pregnancy	-	1	2	-	-	3
Ectopic pregnancy	-	5	16	1	-	22
Stillbirth	-	3	10	-	-	13
Live birth *	11	205	398	29	-	653
<b>All outcomes</b>	<b>13</b>	<b>270</b>	<b>536</b>	<b>39</b>	<b>-</b>	<b>868</b>
	<b>Per cent</b>					
Spontaneous abortion	15.4	20.7	20.5	23.1	-	20.4
Termination of pregnancy	-	0.4	0.4	-	-	0.3
Ectopic pregnancy	-	1.9	3.0	2.6	-	2.5
Stillbirth	-	1.1	1.9	-	-	1.5
Live birth *	84.6	75.9	74.3	74.4	-	75.2
<b>All outcomes</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>-</b>	<b>100.0</b>

\* Multiple pregnancies with both stillbirths and live births are included only in the live birth category

\*\* Includes 10 pregnancies in which the number of oocytes transferred was not stated

**Table 72: Drugs used in luteal phase after GIFT, 1985-1994**

Drugs	Number			Per cent		
	1985-92	1993	1994	1985-92	1993	1994
Proluton	37	3	4	0.7	0.3	0.5
Human chorionic gonadotrophin (hCG)	3,037	774	649	60.4	76.0	74.9
Human chorionic gonadotrophin / Proluton	283	4	1	5.6	0.4	0.1
Progestagen	575	135	154	11.4	13.3	17.8
Other drugs	6	-	-	0.1	-	-
None	1,093	102	58	21.7	10.0	6.7
Not stated	56	4	2			
<b>All pregnancies</b>	<b>5,087</b>	<b>1,022</b>	<b>868</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 73: Outcome of pregnancy in maternal age groups, GIFT pregnancies, 1985-1994**

Outcome of pregnancy	Maternal age (years)					All ages*
	Less than 25	25 - 29	30 - 34	35 - 39	40 and over	
	<b>Number</b>					
Spontaneous abortion	27	262	580	443	137	1,449
Termination of pregnancy	1	5	8	11	11	36
Ectopic pregnancy	8	62	115	63	9	257
Stillbirth	2	15	32	25	3	77
Live birth	147	1,372	2,275	1,189	173	5,158
<b>All outcomes</b>	<b>185</b>	<b>1,716</b>	<b>3,010</b>	<b>1,731</b>	<b>333</b>	<b>6,977</b>
	<b>Per cent</b>					
Spontaneous abortion	14.6	15.3	19.3	25.6	41.1	20.8
Termination of pregnancy	0.5	0.3	0.3	0.6	3.3	0.5
Ectopic pregnancy	4.3	3.6	3.8	3.6	2.7	3.7
Stillbirth	1.1	0.9	1.1	1.4	0.9	1.1
Live birth	79.5	80.0	75.6	68.7	52.0	73.9
<b>All outcomes</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

\* Includes 2 pregnancies in which maternal age was not stated

**Table 74: Spontaneous abortions, GIFT pregnancies, 1985-1994**

Outcome of pregnancy	1985-91	1992	1993	1994	1985-94
Spontaneous abortion	869	214	189	177	1,449
Stillbirth	51	9	4	13	77
Live birth	2,934	781	790	653	5,158
Total abortions and births	3,854	1,004	983	843	6,684
Spontaneous abortion rate (%)	22.5	21.3	19.2	21.0	21.7

**Table 75: Incidence of spontaneous abortions in maternal age groups, GIFT pregnancies, 1985-1994**

Maternal age (years)	Number of GIFT pregnancies*	Spontaneous abortions	
		Number	Per cent
Less than 25	176	27	15.3
25 - 29	1,650	262	15.9
30 - 34	2,889	580	20.1
35 - 39	1,657	443	26.7
40 - 44	298	127	42.6
45 and over	17	10	58.8
Not stated	2	-	
<b>All ages</b>	<b>6,689</b>	<b>1,449</b>	<b>21.7</b>

\* Spontaneous abortions and pregnancies of at least 20 weeks' gestation

**Table 76: Ectopic pregnancies after GIFT, 1985-1994**

Outcome of pregnancy	1985-91	1992	1993	1994	1985-94
Ectopic pregnancies	176	27	32	22	257
Clinical pregnancies	4,051	1,036	1,022	868	6,977
% ectopic pregnancies	4.3	2.6	3.1	2.5	3.7
Total abortions and births	3,875	1,009	990	846	6,720
Ectopic pregnancy ratio *	1:22.0	1:37.4	1:30.9	1:38.5	1:26.1

\* Ratio of ectopic pregnancies: total abortions and births

**Table 77: Reported complications of pregnancy, GIFT pregnancies, 1990-1994**

Pregnancy complications	Number			Per cent		
	1990-92	1993	1994	1990-92	1993	1994
None	1,265	506	431	59.9	62.4	64.9
Threatened abortion	162	59	28	7.7	7.3	4.2
Antepartum haemorrhage	61	10	13	2.9	1.2	2.0
Pregnancy-induced hypertension	141	70	52	6.7	8.6	7.8
Placenta praevia	19	7	6	0.9	0.9	0.9
Other complications	463	159	134	21.9	19.6	20.2
Not stated	708	211	204			
<b>All pregnancies</b>	<b>2,819</b>	<b>1,022</b>	<b>868</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 78: Duration of singleton and multiple GIFT pregnancies of at least 20 weeks' gestation, 1994**

Gestational age (weeks)	Singleton		Twin		Triplet		All pregnancies*	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
20 - 23	7	1.4	8	5.4	2	7.7	18	2.7
24 - 27	5	1.0	3	2.0	-	-	8	1.2
28 - 31	6	1.2	9	6.1	5	19.2	21	3.1
32 - 36	50	10.2	63	42.9	18	69.2	131	19.6
37 - 41	420	85.4	62	42.2	1	3.8	483	72.4
42 or more	4	0.8	2	1.4	-	-	6	0.9
20 - 36	68	13.8	83	56.5	25	96.2	178	26.7
Not stated	-	-	-	-	-	-	-	-
<b>All gestational ages</b>	<b>492</b>	<b>100.0</b>	<b>147</b>	<b>100.0</b>	<b>26</b>	<b>100.0</b>	<b>667</b>	<b>100.0</b>

\* Includes 2 quadruplet pregnancies

**Table 79: Maternal age and duration of singleton GIFT pregnancies of at least 20 weeks' gestation, 1994**

Gestational age (weeks)	Maternal age (years)					All ages*
	Less than 25	25 - 29	30 - 34	35 - 39	40 and over	
	Number					
20 - 27	-	2	5	4	1	12
28 - 31	1	1	3	-	1	6
32 - 36	2	14	19	10	5	50
37 or more	11	110	180	98	24	424
Not stated	-	-	-	-	-	-
<b>All gestational ages</b>	<b>14</b>	<b>127</b>	<b>207</b>	<b>112</b>	<b>31</b>	<b>492</b>
20 - 36	3	17	27	14	7	68
	Per cent					
20 - 27	-	1.6	2.4	3.6	3.2	2.4
28 - 31	7.1	0.8	1.4	-	3.2	1.2
32 - 36	14.3	11.0	9.2	8.9	16.1	10.2
37 or more	78.6	86.6	87.0	87.5	77.4	86.2
<b>All gestational ages</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
20 - 36	21.4	13.4	13.0	12.5	22.6	13.8

\* Includes 1 pregnancy with maternal age 'not stated'

**Table 80: Causes of infertility and duration of singleton GIFT pregnancies of at least 20 weeks' gestation, 1994**

Gestational age (weeks)	Causes of infertility					All causes*
	Tubal	Male	Endometriosis	Multiple	Unexplained	
	Number					
20 - 27	1	3	1	3	2	12
28 - 31	-	-	1	2	1	6
32 - 36	-	6	9	10	17	50
37 - or more	12	97	65	98	106	424
<b>All gestational ages</b>	<b>13</b>	<b>106</b>	<b>76</b>	<b>113</b>	<b>126</b>	<b>492</b>
20 - 36	1	9	11	15	20	68
	Per cent					
20 - 27	7.7	2.8	1.3	2.7	1.6	2.4
28 - 31	-	-	1.3	1.8	0.8	1.2
32 - 36	-	5.7	11.8	8.8	13.5	10.2
37 - or more	92.3	91.5	85.5	86.7	84.1	86.2
<b>All gestational ages</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
20 - 36	7.7	8.5	14.5	13.3	15.9	13.8

\* Includes 58 pregnancies with 'other' or 'not stated' causes of infertility

**Table 81: Plurality of GIFT pregnancies of at least 20 weeks' gestation, 1985-1994**

Plurality	Number			Per cent		
	1985-92	1993	1994	1985-92	1993	1994
Singletons	2,792	599	485	73.9	75.5	73.5
Twins	829	172	147	21.9	21.7	22.3
Triplets	146	20	26	3.9	2.5	3.9
Quadruplets	11	1	2	0.3	0.1	0.3
Quintuplets	1	1	-	0.0	0.1	-
<b>All pregnancies</b>	<b>3,779</b>	<b>793</b>	<b>660</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 82: Plurality of GIFT pregnancies of at least 20 weeks' gestation and number of oocytes transferred, 1994**

Number of oocytes transferred	Plurality							
	Singleton		Twin		Triplet		All pregnancies*	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
1	10	90.9	1	9.1	-	-	11	100.0
2	171	81.8	36	17.2	2	1.0	209	100.0
3	288	70.6	96	23.5	23	5.6	408	100.0
4	13	44.8	14	48.3	1	3.4	29	100.0
5 or more	-	-	-	-	-	-	-	-
Not stated	10		-		-		10	
<b>All pregnancies</b>	<b>492</b>	<b>73.8</b>	<b>147</b>	<b>22.0</b>	<b>26</b>	<b>3.9</b>	<b>667</b>	<b>100.0</b>

\* Includes 2 quadruplet pregnancies

**Table 83: Method of delivery for singleton and multiple GIFT pregnancies of at least 20 weeks' gestation, 1994**

Plurality	Method of delivery				
	Vaginal		Caesarean section		All methods*
	Number	Per cent	Number	Per cent	Number
Singleton	343	70.1	146	29.9	492
Twin	74	50.3	73	49.7	147
Triplet	2	8.0	23	92.0	26
Quadruplet	1	50.0	1	50.0	2
<b>All pregnancies</b>	<b>420</b>	<b>63.3</b>	<b>243</b>	<b>36.7</b>	<b>667</b>

\* Includes 4 pregnancies in which the method of delivery was not stated

**Table 84: Sex of infants in singleton and multiple GIFT births of at least 20 weeks' gestation, selected conception cohorts, 1985-1994**

Plurality	Male			Female			Sex ratio (M:F)		
	1985-92	1993	1994	1985-92	1993	1994	1985-92	1993	1994
Singletons	1,435	319	261	1,340	282	227	107.1	113.1	115.0
Twins	840	167	153	809	177	140	103.8	94.4	109.3
Triplets	248	34	39	190	23	38	130.5	147.8	102.6
Quadruplets	27	2	3	17	2	5	158.8	100.0	60.0
Quintuplets	2	2	-	3	3	-	66.7	66.7	-
<b>All births</b>	<b>2,552</b>	<b>524</b>	<b>456</b>	<b>2,359</b>	<b>487</b>	<b>410</b>	<b>108.2</b>	<b>107.6</b>	<b>111.2</b>

*Note: Infant's sex was not stated for 34 births*

**Table 85: Birthweight of GIFT live births and stillbirths, 1994**

Birthweight (g)	Live births		Stillbirths		All births	
	Number	Per cent	Number	Per cent	Number	Per cent
Less than 500	7	0.8	13	61.9	20	2.3
500 - 999	23	2.7	4	19.0	27	3.1
1000 - 1499	32	3.8	1	4.8	33	3.8
1500 - 1999	84	9.9	1	4.8	85	9.8
2000 - 2499	127	15.0	1	4.8	128	14.8
2500 - 2999	202	23.9	1	4.8	203	23.4
3000 - 3499	215	25.4	-	-	215	24.8
3500 - 3999	117	13.8	-	-	117	13.5
4000 and over	38	4.5	-	-	38	4.4
Not stated	-	-	6	-	6	-
<b>All birthweights</b>	<b>845</b>	<b>100.0</b>	<b>27</b>	<b>100.0</b>	<b>872</b>	<b>100.0</b>
Mean birthweight (g)	2,773		728		2,723	



**Table 86: Birthweight of infants in singleton and multiple GIFT births of at least 20 weeks' gestation, 1994**

Birthweight (g)	Singleton		Twin		Triplet		All births*	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Less than 500	1	0.2	11	3.8	4	5.2	20	2.3
500 - 999	7	1.4	10	3.4	9	11.7	27	3.1
1000 - 1499	6	1.2	15	5.1	10	13.0	33	3.8
1500 - 1999	10	2.0	45	15.4	29	37.7	85	9.8
2000 - 2499	22	4.5	86	29.4	20	26.0	128	14.8
2500 - 2999	108	22.1	92	31.4	3	3.9	203	23.4
3000 - 3499	184	37.7	29	9.9	2	2.6	215	24.8
3500 - 3999	112	23.0	5	1.7	-	-	117	13.5
4000 and over	38	7.8	-	-	-	-	38	4.4
Less than 2500	46	9.4	167	57.0	72	93.5	293	33.8
Not stated	4		1		1		6	
<b>All birthweights</b>	<b>492</b>	<b>100.0</b>	<b>294</b>	<b>100.0</b>	<b>78</b>	<b>100.0</b>	<b>872</b>	<b>100.0</b>
Mean birthweight (g)	3,185		2,272		1,711		2,723	

\* Includes 8 quadruplet births

**Table 87: Outcome of infants in singleton and multiple GIFT births of at least 20 weeks' gestation, 1994**

Outcome	Singleton	Twin	Triplet	Quadruplet	All births
Live births	483	282	72	8	845
Stillbirths	9	12	6	-	27
<b>All births</b>	<b>492</b>	<b>294</b>	<b>78</b>	<b>8</b>	<b>872</b>
Neonatal deaths	2	8	3	4	17
Perinatal deaths	11	20	9	4	44
Stillbirth rate per 1,000 total births	18.3	40.8	76.9	-	31.0
Neonatal death rate per 1,000 live births	4.1	28.4	41.7	500.0	20.1
Perinatal mortality rate per 1,000 total births	22.4	68.0	115.4	500.0	50.5

**Table 88: Major congenital malformations in singleton and multiple GIFT births of at least 20 weeks' gestation, 1985-1994**

Outcome	Singleton	Multiple	All births*
Total births	3,906	2,936	6,842
Congenital malformations			
- number	106	68	174
- rate (per cent)	2.7	2.3	2.5

\* Includes 23 abortions for fetal abnormality at gestational ages of at least 16 weeks

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# Appendix 1 Definitions

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**Clinical pregnancy:** Any type of pregnancy except that diagnosed only by measuring levels of human chorionic gonadotrophin. This definition includes ectopic pregnancy, blighted ovum and spontaneous abortion.

**Conception cohort:** A designated group of pregnancies resulting from conception in a specified period of time (usually either a single year or several years combined).

**Ectopic pregnancy:** Pregnancy occurring outside the uterus.

**Fetal death (stillbirth):** Death prior to the complete expulsion or extraction from its mother of a product of conception of 20 or more completed weeks of gestation or of 400g or more birthweight; the death is indicated by the fact that after such separation the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

**Live birth:** Infant with signs of life after pregnancy of at least 20 weeks' gestation.

**Live-birth pregnancy:** A pregnancy resulting in one or more live births.

**Low birthweight:** A liveborn or stillborn infant weighing less than 2500g at birth.

**Neonatal death:** A death of a liveborn infant within 28 days of birth (expressed as a rate per 1,000 live births).

**Perinatal death:** Includes both stillbirths and neonatal deaths (expressed as a rate per 1,000 total births).

**Postneonatal death:** A death of a liveborn infant more than 28 days after birth but within the first year (expressed as a rate per 1,000 live births).

**Preterm birth:** A liveborn or stillborn infant of less than 37 weeks' gestation.

**Spontaneous abortion:** Pregnancy detected clinically or by ultrasound and less than 20 weeks' gestation (from the first day of the last menstrual period).

**Stillbirth:** See fetal death.

**Viable pregnancy:** A pregnancy of at least 20 weeks' gestation.

REGISTER OF PREGNANCIES AFTER IVF OR RELATED PROCEDURES

Please complete all data items by ticking relevant boxes

IVF Unit/Hospital: \_\_\_\_\_ Identification number: \_\_\_\_\_

Usual home address Suburb/Town _____	:	Marital status [ ] Married/De facto	:	Date of birth Mother ___/___/___	Age ___ yrs
State _____ Postcode _____	:	[ ] Single [ ] Other	:	Father ___/___/___	___ yrs
<b>NUMBER OF PREVIOUS PREGNANCIES:</b>		<b>TYPE OF CONCEPTION IN CURRENT PREGNANCY:</b>			
Current marriage	:	Previous marriages	:		
Livebirths _____	:	Mother:livebirths _____	:	[ ] IVF	[ ] PROST/ZIFT [ ] TEST
Abortions _____	:	other _____	:	[ ] GIFT	[ ] ICSI [ ] SUZI
Other _____	:	Father:livebirths _____	:	[ ] Epididymal sperm	[ ] Assisted hatching
	:	other _____	:	[ ] Other (specify) _____	
<b>Did this pregnancy result from use of:</b>					
[ ] Donor sperm		[ ] Donor oocyte		[ ] Frozen embryo	
[ ] Donor embryos		[ ] Frozen oocytes			
What was the date of embryo freezing? ---/---/---			:	If donor oocyte or embryo, what was the age of the donor?	
What was the date of embryo transfer? ___/___/___			:	_____ yrs	
<b>CAUSE OF INFERTILITY PRIOR TO THIS PREGNANCY</b> [ ] Unknown cause					
Tubal [ ] Tubal obstruction		[ ] Previous ectopic		[ ] Salpingectomy	
[ ] Sterilization		[ ] Pelvic adhesions		[ ] Pelvic inflammatory disease	
[ ] Other tubal (specify) _____					
Male factor [ ] Azoospermia		[ ] Oligospermia			
[ ] Increased abnormal sperm		[ ] Male sperm antibodies			
[ ] Decreased motility		[ ] Other male (specify) _____			
[ ] Endometriosis		[ ] Ovulation defects		[ ] Maternal sperm antibodies	
[ ] 'Hostile' cervical mucus		[ ] Other cause (specify) _____			
<b>DURATION OF INFERTILITY (before first IVF/GIFT pregnancy) _____ years</b>					
<b>DRUGS USED TO INDUCE OVULATION IN OOCYTE RETRIEVAL CYCLE (specify each separately)</b>					
[ ] Clomiphene		[ ] hMG		[ ] hCG	[ ] Endogenous LH surge
[ ] FSH		[ ] Recomb DNA FSH		[ ] Recomb DNA LH	
[ ] GnRH-agonist (specify) _____		[ ] short protocol		[ ] long protocol (previous luteal phase)	
[ ] None		[ ] Other (specify) _____			
<b>DRUGS USED DURING CYCLE IN WHICH FROZEN EMBRYOS WERE TRANSFERRED(specify each separately)</b>					
[ ] None		[ ] Oestrogen/progesterone		[ ] Other (specify) _____	

SPECIFY IN WHICH OOCYTE RETRIEVAL CYCLE THE PREGNANCY OCCURRED _____ Number of oocytes collected _____ IF DONOR OOCYTES WERE USED, IN WHICH INDUCTION CYCLE DID PREGNANCY OCCUR _____	<b>METHOD OF COLLECTING OOCYTES</b> : : [ ] Laparoscopy : [ ] Ultrasound-guided transvaginal : [ ] Other (specify) _____		
Date of fertilization (or GIFT, etc) --/--/--: Number of embryos/ova transferred _____			
Was the patient hospitalised for ovarian hyperstimulation syndrome? [ ] Yes [ ] No			
<b>DRUGS USED IN LUTEAL PHASE</b> [ ] hCG: specify dose and duration _____ [ ] Progesterone: specify dose and duration _____ [ ] Oestrogen/progesterone (frozen embryo transfer) _____ [ ] Other (specify) _____ [ ] None	<b>OBSTETRIC COMPLICATIONS</b> : [ ] None [ ] Pregnancy-induced hypertension : [ ] Threatened abortion : [ ] Placenta praevia : [ ] Antepartum haemorrhage : [ ] Embryo reduction : [ ] Other _____		
NUMBER OF SACS SEEN IN EARLY PREGNANCY ON ULTRASOUND EXAMINATION _____	[ ] Ultrasound not done		
<b>PREGNANCY OUTCOME</b>			
[ ] Spontaneous abortion (date __/__/__)			
[ ] Missed abortion (date of curette --/--/--) [ ] Ovarian pregnancy			
[ ] Induced abortion (date __/__/__, specify malformations _____)			
[ ] Other (e.g. combined pregnancy) _____			
[ ] Pregnancy of 20 weeks or more	Date of birth __/__/__		
[ ] Multiple births (number _____)			
<b>METHOD OF DELIVERY</b> [ ] Vaginal [ ] Caesarean section			
<b>LIVEBIRTHS AND STILLBIRTHS</b>			
	1	2	3
Sex	M F	M F	M F
Birthweight	_____g	_____g	_____g
Condition at birth (delete one)	Live birth/ Stillbirth	Live birth/ Stillbirth	Live birth/ Stillbirth
If baby died, date of death	__/__/__	__/__/__	__/__/__
Any congenital malformations?	[ ] Yes [ ] No	[ ] Yes [ ] No	[ ] Yes [ ] No
Specify malformations or other abnormalities			

Please send to:

ALICE NATIONAL PERINATAL STATISTICS UNIT  
 Level 3, Vets. Stables Building  
 Prince of Wales Hospital 80  
 Randwick NSW 2031