

112 年

人工生殖施行結果分析報告

**The Assisted Reproductive
Technology Summary**

2023 National Report of Taiwan

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說 明

- 一、人工生殖資料庫自民國 87 年建立後，由各人工生殖機構定期通報期間內於其機構接受人工生殖的個案資料（但不含配偶間的人工授精）。
- 二、本報告係依據人工生殖機構所通報之個案資料進行統計分析，報告內容以圖表為主，並搭配文字說明輔助。
- 三、本報告所稱的「年」，是指個案在 112 年 1 月 1 日至 112 年 12 月 31 日之間「開始使用排卵藥物」或「正式進入治療週期」的日期；懷孕與活產的分析也採用同樣的標準。
- 四、「年齡」以「足歲」計算，也就是未滿 35 歲（如：34 歲又 9 個月）都列入 34 歲年齡層。
- 五、如果同一治療週期同時植入「新鮮胚胎」與「冷凍胚胎」，在胚胎類型的分析中，會歸類為「新鮮胚胎」類別計算。
- 六、因應 110 年 7 月 1 日起政府實施「體外受精（俗稱試管嬰兒）人工生殖技術補助方案」，本報告於第三章及第四章內容也相應調整，因此和往年的統計方式有所不同。
- 七、為能與第二章所有人工生殖治療週期相互對應，因此調整第三章本國籍人工生殖各節名稱，以及各節描述統計分析內容。
- 八、為利呈現人工生殖機構申請再次許可審核項目之「未滿 38 歲治療週期累積活產率」，並瞭解本國籍使用配偶精卵之活產嬰兒狀況，因此調整第三章第六節並增加統計分析圖。
- 九、原 111 年報告中第四章第四節圖 33 數據只納入新鮮胚胎的



統計結果，為更準確呈現本國籍受術夫妻使用配偶精卵之活產週期出生胎數，因此調整該章節之統計圖分析方式，改為不限使用新鮮胚胎之近年活產週期數統計結果。

十、本報告除了印製成冊，也會刊登於衛生福利部國民健康署機關網站；歷年的報告（87 年至 112 年）也可在該網站查詢及下載（網站位址：<https://hpa.gov.tw>）。



Guide to the Report

1. The assisted reproduction database of Taiwan was established in 1998 and has been periodically updated with assisted reproduction (excluding data for artificial insemination using husband's semen) case data reported from each assisted reproduction institute in Taiwan.
2. This report is based on the results of a statistical analysis conducted on case data received from assisted reproduction institutes. Details of the report are expressed in graphs with a corresponding text explanation.
3. The term “year” herein refers to the period between January 1st and December 31st of 2023, in which the case received assisted reproductive technology; that is, covering the “date of initiating the use of the fertility drug” or the “date of initiating the treatment cycle”. The period so defined shall be applied to pregnancy and live birth analyses as well.
4. “Age” statistics in the report refer to the “full age”; for example, a subject who is 34 years and 9 months old shall be categorized and calculated in the age group of 34 years.
5. Cycles in which fresh and frozen embryos are simultaneously transferred shall be categorized and calculated as “fresh embryos”.
6. In response to the implementation of the "In Vitro Fertilization (commonly known as IVF) Assisted Reproductive Technology Subsidy Program" starting July 1, 2021, the content of Chapter 3 and Chapter 4 in this report has been adjusted, resulting in differences compared to the statistical analysis of previous years.
7. To ensure alignment with all assisted reproduction treatment (ART) cycles presented in Chapter 2, the titles and statistical analysis data of each section in Chapter 3 on ART among nationals were adjusted accordingly.
8. To more clearly present the cumulative live birth rate for women under the



age of 38 years—an indicator used in reviewing the renewal of assisted reproduction institution permits—and to provide a clearer picture of live births among nationals using nondonor gametes, Chapter 3, Section 6 was revised and supplemented with statistical analysis charts.

9. In the 2022 report, Figure 33 in Chapter 4, Section 4 included only data from fresh embryo transfers. To more accurately reflect the number of infants born from live birth cycles among national recipient couples using nondonor gametes, the statistical method for this section was revised to include data from recent years, regardless of whether fresh embryos were used.
10. In addition to this publication, this report is also posted on the Health Promotion Administration, Ministry of Health and Welfare website, where reports from 1998 to 2023 are also available.
(HPA website: <https://www.hpa.gov.tw>)



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第一章 總論

為健全人工生殖之發展，保障不孕夫妻、人工生殖子女與捐贈人之權益，維護國民之倫理及健康，於民國 96 年 3 月 21 日公布施行人工生殖法。依據該法第 27 條規定，人工生殖機構應通報受術人次、成功率、不孕原因，以及所採行之人工生殖技術等相關事項，由主管機關建立人工生殖資料庫管理，並定期公布上述資料。

然而為人工生殖業務及資料庫之管理，我國自 84 年起，即陸續訂定相關辦法加以規範。在 87 年人工生殖資料庫建立之初，人工生殖機構計 48 家，截至 114 年 7 月止，通過許可得實施人工生殖之醫療機構共 103 家。依人工生殖法第 6 條之規定，醫療機構應申請主管機關許可後，始得實施人工生殖、接受生殖細胞之捐贈、儲存或提供之行為，為維護醫療機構施行人工生殖技術之醫療品質，定期辦理人工生殖機構之許可審查。

本報告針對 112 年於全國總計 101 家人工生殖機構接受治療之個案資料進行統計分析。因應 110 年 7 月 1 日起政府實施「體外受精（俗稱試管嬰兒）人工生殖技術補助方案」，擴大補助對象，除第一章簡介人工生殖的方法與治療週期之涵義，及第二章以所有治療週期為統計，包含配偶間的人工生殖資料以及接受精卵捐贈者之資料，維持歷年報告之分析架構外，調整第三章撰述內容，特別針對本國籍受術夫妻的人工生殖進行分析，並於第四章針對 87 年至 112 年的趨勢進行分析。



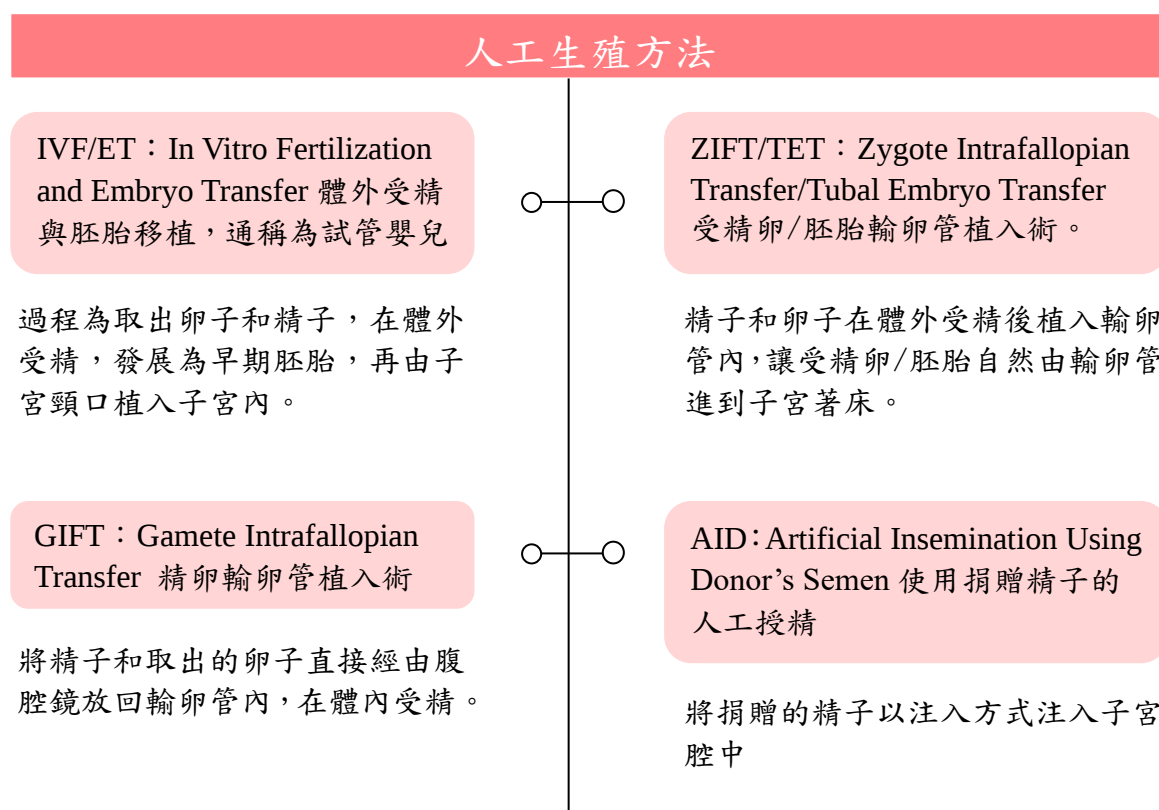
第一節、人工生殖治療週期

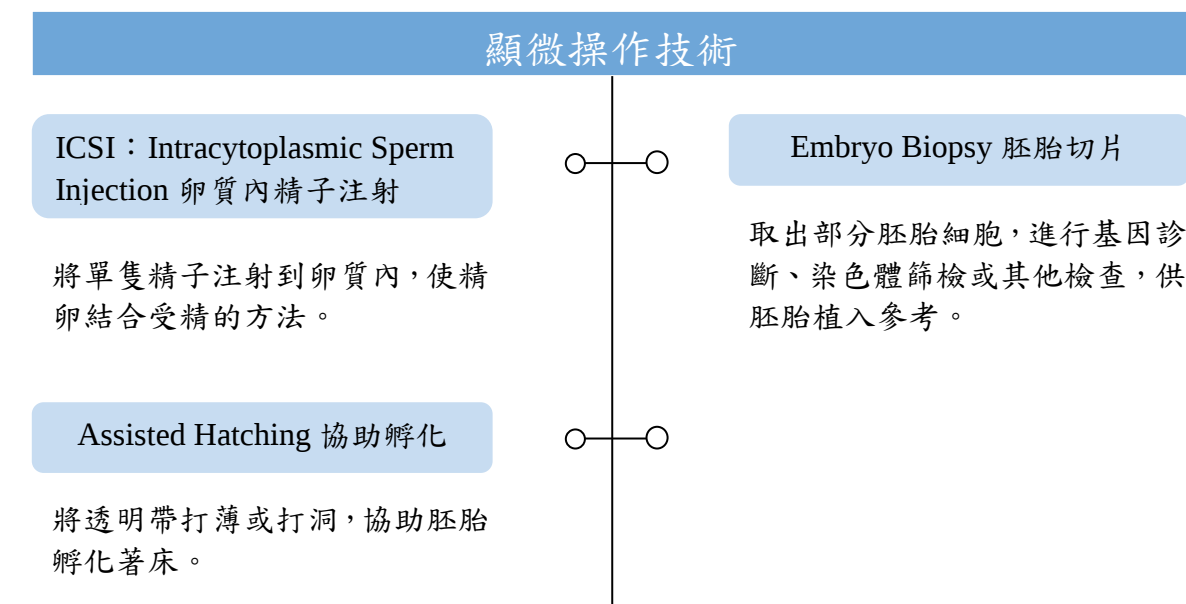
茲因人工生殖包含長達近 2 週或更久的數個步驟，故於資料分析時，以「週期 (cycle)」為單位考量，會比單一時間點的考量妥切。而以這種方式計算，在統計分析時，同一對接受人工生殖治療之夫妻，將可能貢獻 1 個或 1 個以上的週期。

當個案開始使用排卵藥物以刺激排卵，或為了胚胎的植入而開始進行檢查時，即為週期計算開始，而其最終目標在於順利生產健康之嬰兒，然而並非所有接受治療之週期都能順利懷孕並持續到生產，但仍會被列於治療週期個案統計。

第二節、人工生殖的技術

本節針對人工生殖技術 (Assisted Reproductive Technology, ART) 所呈現的幾種人工生殖方法及顯微操作技術進行說明。





依人工生殖法第 5 條之規定，以取出夫之精子植入妻體內實施之配偶間人工授精（Artificial Insemination Using Husband's Semen，AIH），除第 16 條第 3 款規定禁止選擇胚胎性別及其違反之處罰規定外，不適用人工生殖法之規定。此類配偶間人工授精的治療不侷限於人工生殖機構，個案資料不需通報，因此本報告所稱人工生殖個案以及所有分析數據均不包含以 AIH 方式執行之人工生殖。



第二章 所有治療週期之統計

本報告所列的資料期間，均以週期開始的時間點為計算基準。所使用的分析資料，係來自 112 年總計 101 家人工生殖機構定期通報的資料。

第一節、治療週期數

112 年人工生殖之週期（含未完成取卵或植入之週期）共有 58,557 週期（表 1）。54,912 週期為配偶間人工生殖（占 93.8%），3,645 週期為使用捐贈精卵人工生殖（占 6.2%）。

表1 112 年人工生殖治療週期類別

單位：週期/%

週期類別	人工生殖治療週期數	百分比
使用捐贈精卵	3,645	6.2
使用捐精	386	0.7
使用捐卵	3,259	5.6
使用配偶精卵	54,912	93.8
全部治療週期	58,557	100

第二節、接受人工生殖治療者之年齡

在所有接受治療之受術夫妻中，受術妻年齡介於 35 歲到 39 歲之間占多數，占 35%；受術夫年齡介於 40 歲到 44 歲之間占最多數，為 31.4%（表 2）。以個別年齡看，受術妻以 39 歲 7.94% 占最多，其次為 40 歲占 7.86%。另使用捐卵受術妻之年齡分布如表 3，以 45-49 歲最多，占 40.6%。

表2 112 年人工生殖受術夫妻之年齡別

年齡	受術妻		受術夫	
	治療週期數	百分比	治療週期數	百分比
<25	167	0.3	40	0.1
25-29	2,092	3.6	1,279	2.2
30-34	11,445	19.5	9,033	15.4
35-39	20,468	35.0	18,276	31.2
40-44	19,639	33.5	18,414	31.4
45-49	4,296	7.3	8,254	14.1
≥50	450	0.8	3,261	5.6
全部治療週期	58,557	100	58,557	100

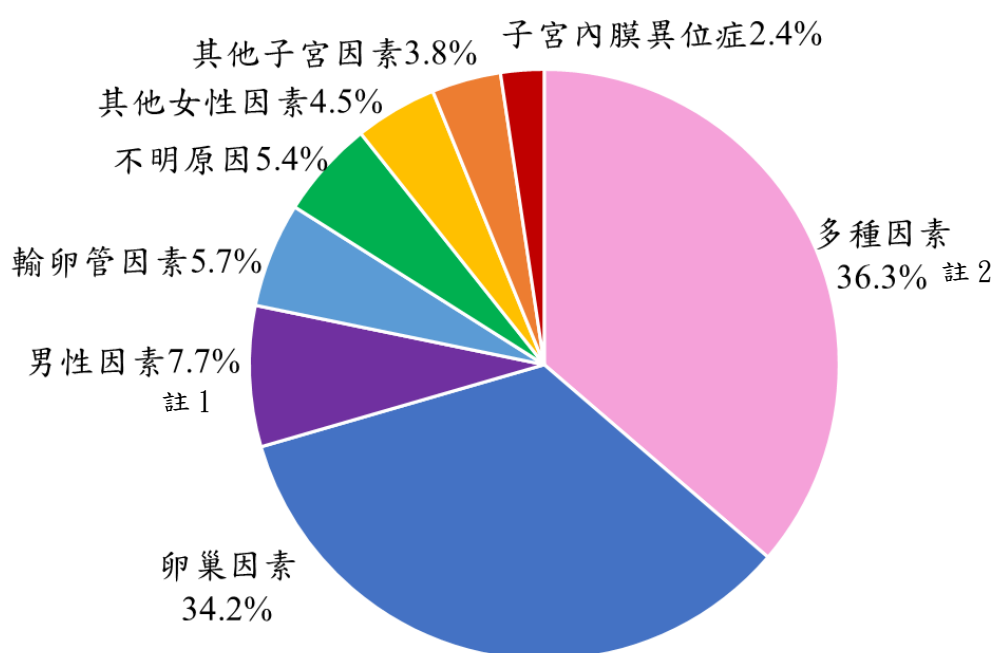
表3 112 年人工生殖使用捐卵之受術妻年齡別

受術妻年齡	單位：週期/%	
	治療週期數	百分比
<25	2	0.1
25-29	17	0.5
30-34	193	5.9
35-39	354	10.9
40-44	1,025	31.5
45-49	1,323	40.6
≥50	345	10.6
使用捐卵治療週期	3,259	100

第三節、不孕原因分析

人工生殖治療個案不孕之原因可能是先天、後天或外在環境所導致，不孕原因所占比例如圖 1，其中以多種因素所占比例 36.3%為最高，卵巢因素 34.2%占第二位，男性因素 7.7%居第三位（圖 1），其中男性不孕原因包含性腺刺激素缺乏、睪丸功能衰退、輸送精子管道阻塞及性功能障礙等。

圖1 112 年人工生殖個案不孕之原因
（圖中百分比之分母為 58,557 治療週期數）



註 1：資料來源為人工生殖機構依人工生殖資料通報及管理辦法之附表 7「人工生殖個案資料表」填報，其男性不孕原因無法再細分。

註 2：多種因素係指 2 種(含)以上不孕因素。

第四節、使用人工生殖方法

所有人工生殖治療方法中，以使用試管嬰兒方法的比例為最多，占 99.96%，其餘使用 GIFT、ZIFT/TET 及 AID 等方法之比例均不超過 0.03%。對於試管嬰兒這種多數週期所選擇使用的人工生殖治療方法，將在第三章第二節中，針對本國籍使用試管嬰兒的治療情形與懷孕結果加以敘述。

第五節、顯微操作技術

112 年人工生殖個案之 58,557 治療週期中，80.4%週期有使用顯微操作技術（表 4），主要包括協助孵化，占 35.2%，其次為卵質內精子注射，占 30.1%，另有 11.4%合併使用多種技術。

表4 112 年人工生殖個案治療週期之使用顯微操作技術情形

顯微操作技術使用情形	治療週期數	單位：週期/%
		百分比
使用	47,053	80.4
卵質內精子注射(ICSI)	17,623	30.1
協助孵化(Assisted Hatching)	20,615	35.2
胚胎切片染色體篩檢或基因診斷	2,141	3.7
胚胎著床前染色體篩檢(PGT-A)	2,091	3.6
胚胎著床前基因診斷(PGT-M)	50	0.1
其他(含合併多種技術)	6,674	11.4
未使用	11,504	19.6
全部治療週期	58,557	100

第六節、植入週期數與胚胎數

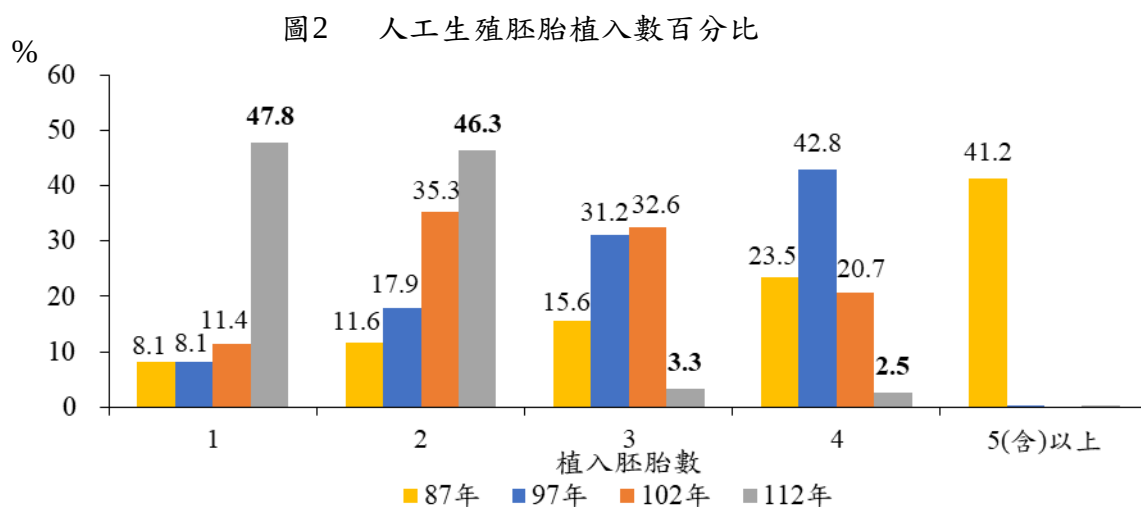
人工生殖 58,557 治療週期中，有植入週期數共 30,575 週期，主要採用配偶精卵所形成的胚胎植入，占 92.0%，其中以配偶精卵形成的冷凍胚胎占 78.0%為最多（表 5）。

表5 112 年人工生殖植入類型百分比

植入類型	植入週期數	單位：週期/%
		百分比
配偶精卵	28,124	92.0
新鮮胚胎	4,267	14.0
冷凍胚胎	23,857	78.0
捐贈精卵	2,451	8.0
新鮮胚胎	163	0.5
冷凍胚胎	2,288	7.5
全部植入週期	30,575	100

為使人工生殖機構在植入胚胎數有所依循，避免植入過多胚胎而提高多胞胎的機率，增加母嬰健康風險或造成家庭經濟負擔，96 年公布施行之人工生殖法，即明定機構實施人工生殖每次不得植入 5 個以上胚胎，換言之，每次植入胚胎數限定在 4 個（含 4 個）以下，且訂有相關罰則。另因多胞胎妊娠其孕產相關風險較單胞胎高，為維護母嬰健康，103 年修訂人工生殖機構許可辦法，將「未滿 35 歲之植入 2 個以下胚胎之比率」納為監測指標之一。在 110 年 7 月 1 日起，政府實施人工生殖擴大補助方案中，更進一步規定未滿 36 歲只能植入 1 個胚胎，36~44 歲只能植入 1~2 個胚胎，方能得到補助。112 年人工生殖治療週期植入 2 個以下胚胎者，占全部植入胚胎週期數 94.1%（111 年為 93.4%，110 年為 84.7%）（圖 2）。

58,557 治療週期中，2.50%有產生卵巢過度刺激症候群，較 111 年 2.79%降低，112 年人工生殖機構通報之輕、中及重度卵巢過度刺激症候群占治療週期數比率，分別為 2.36%、0.11%及 0.03%（表 6）。



註：96 年公布施行之人工生殖法，明定機構實施人工生殖時，每次限植入 4 個（含 4 個）以下之胚胎。

表6 112 年卵巢過度刺激症候群情形

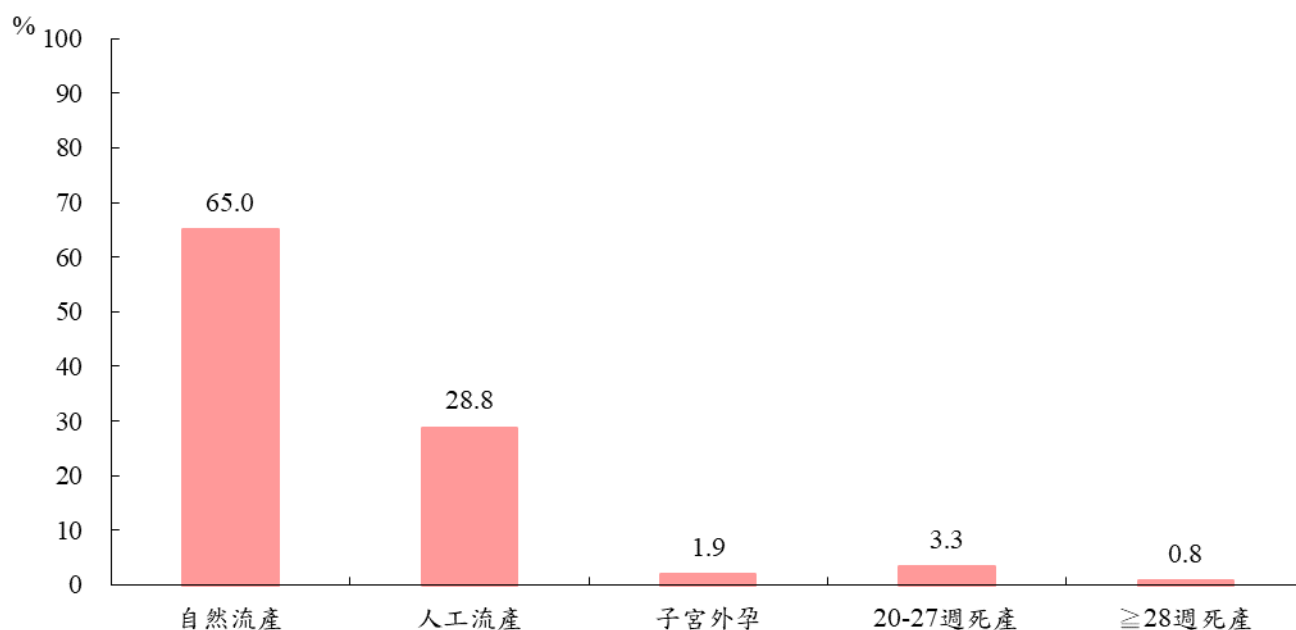
卵巢過度刺激症候群	單位：週期/%	
	治療週期數	百分比
無	57,094	97.50
有	1,463	2.50
輕度	1,382	2.36
中度	64	0.11
重度	17	0.03
合計治療週期	58,557	100

第七節、懷孕與活產情形

人工生殖 58,557 治療週期中，有植入的計 30,575 週期，有懷孕的計 13,623 個週期，有減胎的計 65 週期，有活產的計 10,209 週期，共有 11,658 個嬰兒誕生（14.1%活產週期為多胎生產），較 110 年及 111 年分別增加 1,884 名及 109 名嬰兒誕生。

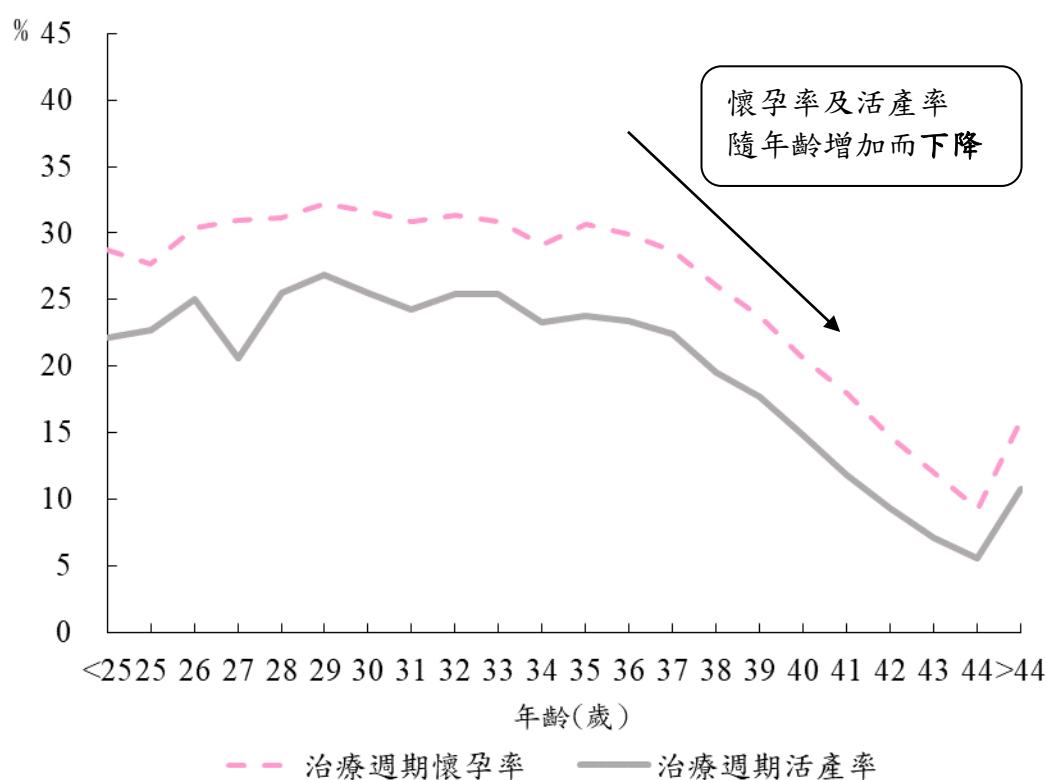
3,414 個有懷孕但無活產紀錄之週期中，2,222 週期為自然流產（占 65.0%），984 週期為人工流產（含懷孕 20 週前無胎心音；占 28.8%），66 週期為子宮外孕（占 1.9%），140 週期為 20-27 週或 ≥ 28 週死產（占 4.1%），71 週期為狀況不明，其中少數週期同時具有自然流產、子宮外孕、人工流產，以及 20-27 週或 ≥ 28 週死產之 2 種以上情形（圖 3）。

圖3 112 年人工生殖懷孕週期無活產紀錄情形百分比
（圖中百分比之分母為 3,414 懷孕但無活產之週期，單位：%）



112年接受人工生殖之治療週期懷孕率為23.3%，治療週期活產率為17.4%。其懷孕率及活產率之計算，對於先將全部胚胎冷凍，後續再解凍進行胚胎植入，則冷凍胚胎及解凍胚胎植入各算一個治療週期，故可能導致上述懷孕率及活產率之低估。受術妻年齡與懷孕率及活產率關係如圖4，其年齡小於25歲和年齡大於44歲者，由於各單一年齡週期數過少，故將年齡採合併計算方式統計，35歲以後，懷孕率與活產率皆隨受術妻年齡之增加而下降。

圖4 112年人工生殖受術妻年齡與懷孕率及活產率關係
(圖中百分比之分母為 58,557 治療週期數)



以下逐一針對人工生殖成功率、懷孕結果及其相關問題分析，並逐項說明。

七種成功率分析

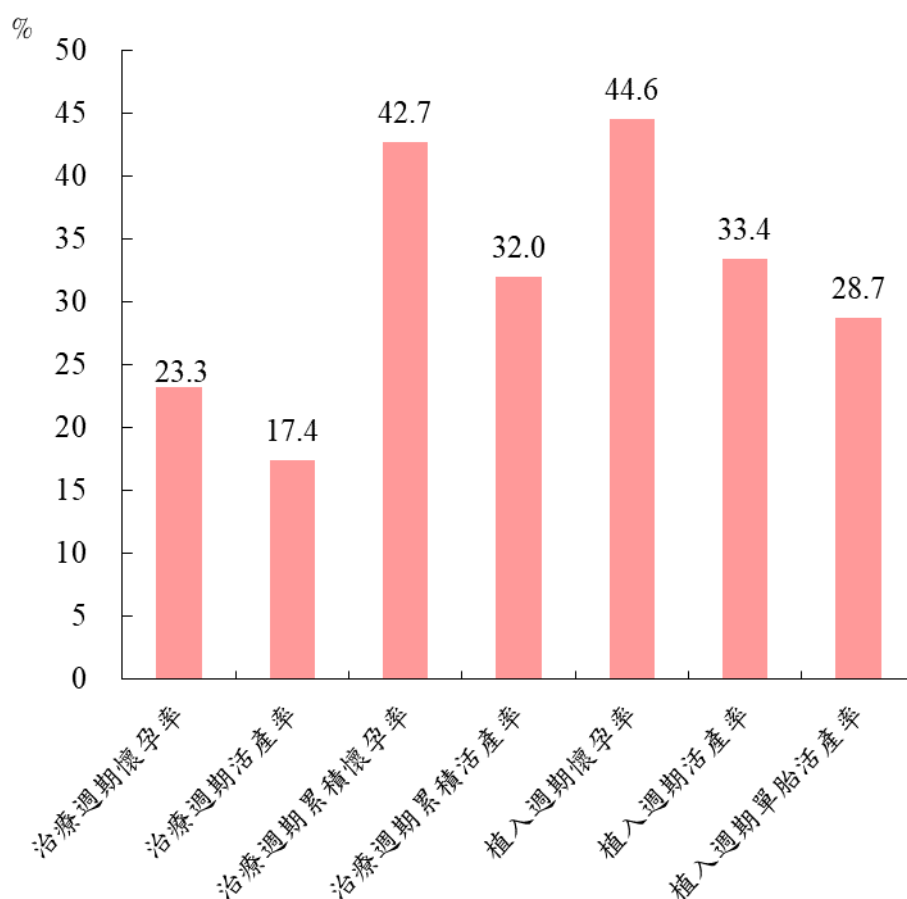
因近年人工生殖技術成熟，越來越多進行全胚冷凍，使得治療週期數增加，但該週期並未進行植入，故以治療週期累積懷孕率、治療週期累積活產率，較能真實呈現人工生殖技術的品質。

圖 5 以七種不同計算方式呈現人工生殖之成功率，包括：治療週期懷孕率、治療週期活產率、治療週期累積懷孕率、治療週期累積活產率、植入週期懷孕率、植入週期活產率與植入週期單胎活產率等，分別描述如下：

1. 治療週期懷孕率：即一般所稱的「懷孕率」。意指人工生殖治療週期中，有懷孕的週期之百分比。由於部分懷孕結果會產生流產、死產等結果，因此，治療週期懷孕率會高於治療週期活產率。112 年之治療週期懷孕率為 23.3%。
2. 治療週期活產率：即一般所稱的「活產率」，指人工生殖治療週期中，有活產的週期之百分比（不論生產單胎或多胎，均只視為一次活產）。這是大多數人較關心的比率，因為它呈現了以人工生殖方法得到活產嬰兒的機會。112 年治療週期活產率為 17.4%。
3. 治療週期累積懷孕率：意指人工生殖治療週期中，每次取卵週期有懷孕之百分比，計算公式：
$$\frac{\text{新鮮胚胎懷孕週期數} + \text{冷凍胚胎懷孕週期數}}{\text{新鮮胚胎治療週期數} + (\text{新鮮胚胎} + \text{冷凍胚胎})\text{治療週期數}}$$
。112 年之治療週期累積懷孕率為 42.7%。
4. 治療週期累積活產率：指人工生殖治療週期中，每次取卵週期有活產之百分比（不論生產單胎或多胎，均只視為一次活產），計算公式：
$$\frac{\text{新鮮胚胎活產週期數} + \text{冷凍胚胎活產週期數} + (\text{新鮮胚胎} + \text{冷凍胚胎})\text{活產週期數}}{\text{新鮮胚胎治療週期數} + (\text{新鮮胚胎} + \text{冷凍胚胎})\text{治療週期數}}$$
。112 年之治療週期累積活產率為 32.0%，未滿 38 歲前治療週期累積活產率則為 49.7%。

5. 植入週期懷孕率：指人工生殖有植入的週期中，其懷孕週期之百分比。112 年植入週期懷孕率為 44.6%。其中，植入新鮮胚胎的懷孕率為 29.0%，而植入冷凍胚胎的懷孕率為 47.2%。
6. 植入週期活產率：指人工生殖有植入的週期中，其活產週期之百分比。112 年植入週期活產率為 33.4%，其中，植入新鮮胚胎的活產率為 19.5%，而植入冷凍胚胎的活產率為 35.8%。
7. 植入週期單胎活產率：指人工生殖有植入的週期中，單胎活產的週期百分比。單胎的活產是人工生殖技術成功的一項重要測量值，因為與單胎生產比較起來，多胎生產在新生兒健康方面有較高的風險，這些可能風險包括：早產、低體重、缺陷和死亡。112 年之植入週期單胎活產率為 28.7%。

圖5 112 年人工生殖成功率分析



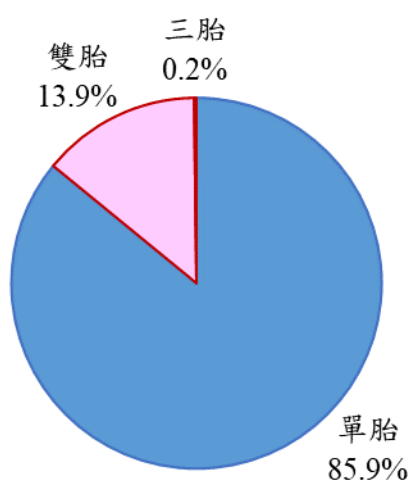
第八節、出生嬰兒狀況

一、活產胎數

在 10,209 個活產週期中，85.9%為單胎生產、13.9%為雙胎生產、0.2%為三胎生產（圖 6）。

於 112 年間接受人工生殖治療後，活產的嬰兒共有 11,658 人。其中，男嬰有 6,255 人，女嬰有 5,403 人（表 7）。

圖6 112 年人工生殖活產週期之胎數百分比
（圖中百分比之分母為 10,209 活產週期）



二、體重、懷孕週數與先天缺陷

11,658 名活產嬰兒中，出生體重大於等於 2,500 公克者占 74.3%，低於 2,500 公克者占 25.7%，包含體重低於 1,500 公克者占 2.8%，體重介於 1,500 至 2,499 公克者占 22.9%；另懷孕週數介於 37-41 週者占 73.5%，週數小於 37 週者占 26.4%，大於等於 42 週者占 0.1%（表 7）；而外觀明顯先天缺陷的嬰兒占所有活產嬰兒之 1.1%，其中出生體重小於 1500 公克之先天缺陷率較高，占 4.9%（表 8）。

表7 112 年人工生殖出生嬰兒性別、體重及週數

		單位：人數/%	
嬰兒狀況	活產嬰兒數	百分比	
性別			
男	6,255	53.7	
女	5,403	46.3	
體重			
<1500 公克	325	2.8	
1500-2499 公克	2,666	22.9	
≥2500 公克	8,667	74.3	
懷孕週數			
<37 週	3,075	26.4	
37-41 週	8,571	73.5	
≥42 週	12	0.1	
合計活產嬰兒數	11,658	100	

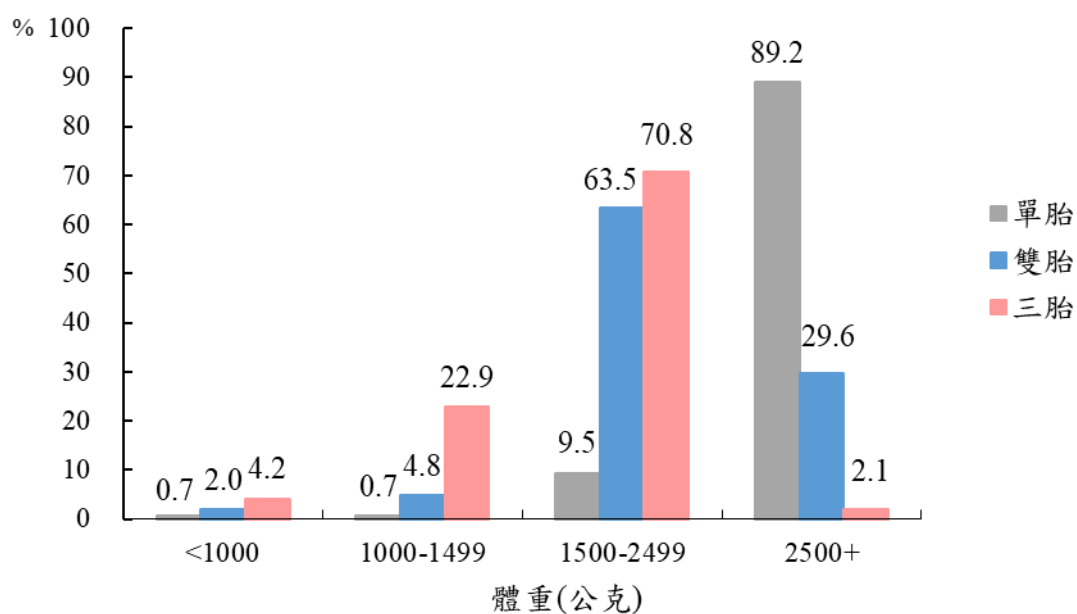
表8 112 年人工生殖出生嬰兒外觀明顯先天缺陷占活產嬰兒百分比及依出生體重區分

單位：人數/%			
出生體重	外觀明顯先天缺陷 嬰兒數	活產嬰兒數	百分比
<1500 公克	16	325	4.9
1500-2499 公克	55	2,666	2.1
≥2500 公克	60	8,667	0.7
合計	131	11,658	1.1

三、胎數別與體重之關係

胎數與出生嬰兒體重之間呈現負相關，亦即胎數愈多，愈易產生低出生體重兒。經統計結果，單胎生產中，以體重在 2,500 公克以上居多，占所有單胎生產之 89.2%。雙胎生產則以 1,500 到 2,499 公克新生兒占 63.5%為最多，2,500 公克以上者只占 29.6%。而三胎生產當中，體重在 1,500 到 2,499 公克新生兒占 70.8%為最高，其次為體重介於 1,000 到 1,499 公克者，占 22.9%，2,500 公克以上者只占 2.1%（圖 7）。

圖7 112 年人工生殖活產週期之胎數別與出生嬰兒體重之關係
(圖中百分比係將 11,658 個活產嬰兒按不同胎數別做區分比較)



第三章 本國籍人工生殖

本章統計本國籍之受術夫妻利用各種治療方法進行人工生殖之情形，包括使用配偶精卵及一方使用捐贈精卵，但不包括配偶間的人工授精（AIH）資料。若受術夫妻之其中一方為本國籍，即納入本節統計分析，排除受術夫妻雙方皆為外國籍者。

第一節、本國籍人工生殖治療週期數

112 年人工生殖 58,557 治療週期中，本國籍人工生殖治療週期共 55,119 週期，占 94.1%，其中 52,827 治療週期為使用配偶精卵者（占 95.8%），2,292 週期為使用捐贈精卵者（占 4.2%）（表 9）。

表9 112 年本國籍人工生殖治療週期類別

週期類別	人工生殖治療週期數	單位：週期/%
		百分比
使用捐贈精卵	2,292	4.2
使用捐精	321	0.6
使用捐卵	1,971	3.6
使用配偶精卵	52,827	95.8
全部治療週期	55,119	100

第二節、本國籍接受人工生殖治療者之年齡

本國籍接受人工生殖治療之受術夫妻年齡分布如表 10，與所有接受人工生殖治療者之年齡分布（表 2，第 5 頁）相近。

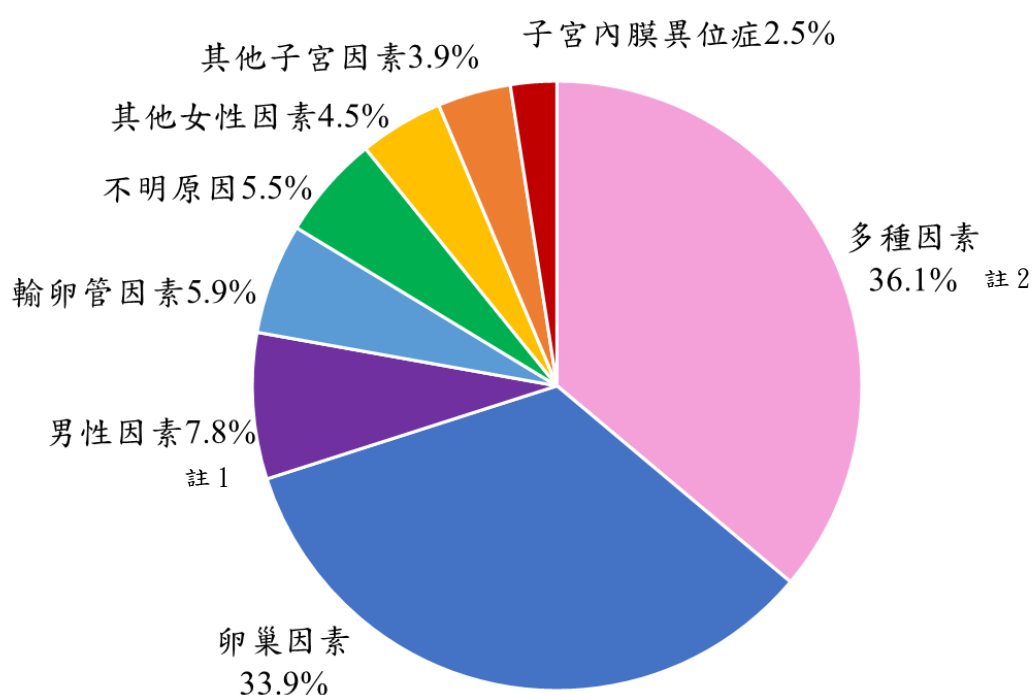
表10 112 年本國籍人工生殖受術夫妻之年齡別

年齡	受術妻		受術夫		單位：週期/%
	治療週期數	百分比	治療週期數	百分比	
<25	163	0.3	39	0.1	
25-29	2,002	3.6	1,241	2.3	
30-34	10,961	19.9	8,629	15.7	
35-39	19,423	35.2	17,279	31.3	
40-44	18,646	33.8	17,466	31.7	
45-49	3,637	6.6	7,631	13.8	
≥50	287	0.5	2,834	5.1	
全部治療週期	55,119	100	55,119	100	

第三節、本國籍不孕原因分析

本國籍人工生殖個案之不孕原因如圖 8，其中以多種因素占 36.1%為最高，其次為卵巢因素，占 33.9%，男性因素 7.8%居第三位。本國籍之不孕原因分布與所有接受人工生殖治療者（圖 1，第 6 頁）相近。

圖8 112 年本國籍人工生殖個案不孕之原因
（圖中百分比之分母為 55,119 治療週期數）



註 1：資料來源為人工生殖機構依人工生殖資料通報及管理辦法之附表 7「人工生殖個案資料表」填報，其男性不孕原因無法再細分。

註 2：多種因素係指兩種(含)以上不孕因素。

第四節、本國籍植入週期數與胚胎數

本國籍人工生殖植入週期數共 28,736 週期，主要採用配偶精卵形成胚胎植入，占 94.7%，其中以配偶精卵形成的冷凍胚胎占 80.1%為最多（表 11），本國籍人工生殖植入週期分布與所有接受人工生殖治療者（表 5，第 7 頁）相近。

表11 112 年本國籍人工生殖植入類型百分比

植入類型	植入週期數	單位：週期/%
		百分比
配偶精卵	27,205	94.7
新鮮胚胎	4,184	14.6
冷凍胚胎	23,021	80.1
捐贈精卵	1,531	5.3
新鮮胚胎	135	0.5
冷凍胚胎	1,396	4.9
全部植入週期	28,736	100

第五節、本國籍懷孕與活產情形

本國籍人工生殖 55,119 治療週期中(包含使用配偶精卵與捐贈精卵)，有懷孕的計 12,677 個週期，有減胎的計 60 週期，有活產的計 9,504 週期，共有 10,833 個嬰兒誕生。

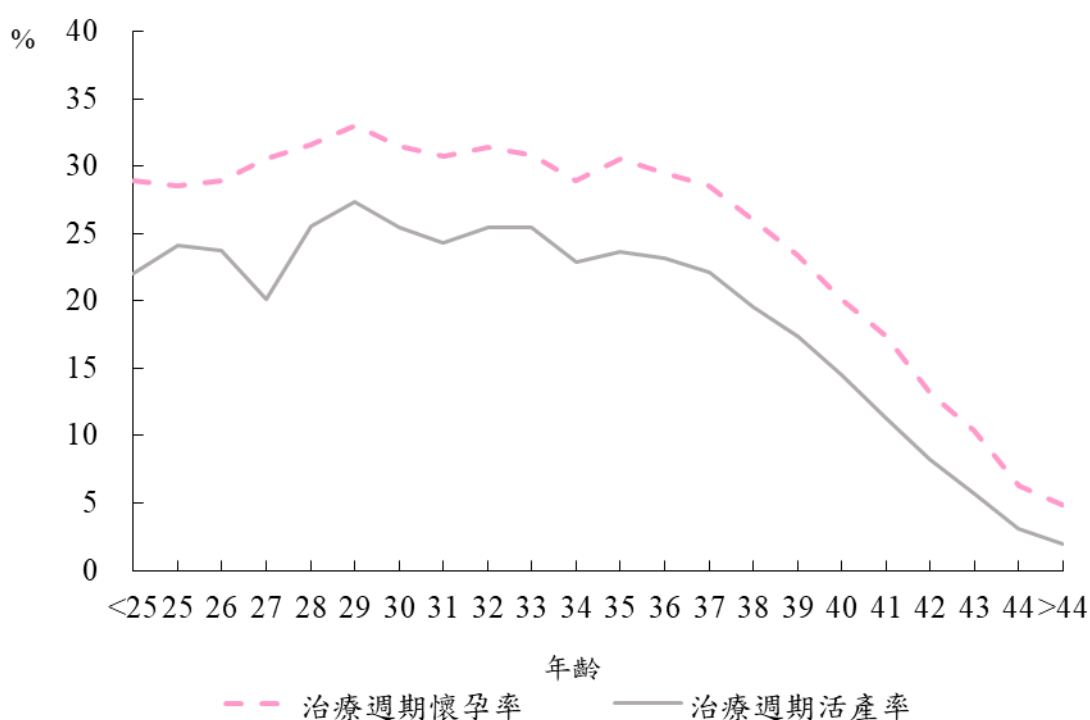
在本國籍人工生殖 9,504 個活產週期中，86.2%為單胎生產、13.7%為雙胎生產、0.1%為三胎生產。活產的 10,833 個嬰兒當中，男嬰有 5,823 人，女嬰有 5,010 人。

第六節、本國籍使用配偶精卵之人工生殖

一、本國籍使用配偶精卵之各年齡懷孕率、活產率

本國籍使用配偶精卵之人工生殖治療週期數為 52,827 週期，懷孕率為 22.4%，治療週期活產率為 16.8%。其懷孕率及活產率之計算，對於先將全部胚胎冷凍，後續再解凍進行胚胎植入，則冷凍胚胎及解凍胚胎植入各算一個治療週期，故可能導致上述懷孕率及活產率之低估。受術妻年齡與懷孕率及活產率關係如圖 9，其年齡小於 25 歲和年齡大於 44 歲者，由於單一年齡週期數過少，故將年齡採合併計算方式統計。在 35 歲以後，懷孕率與活產率皆隨著受術妻年齡之增加而下降。

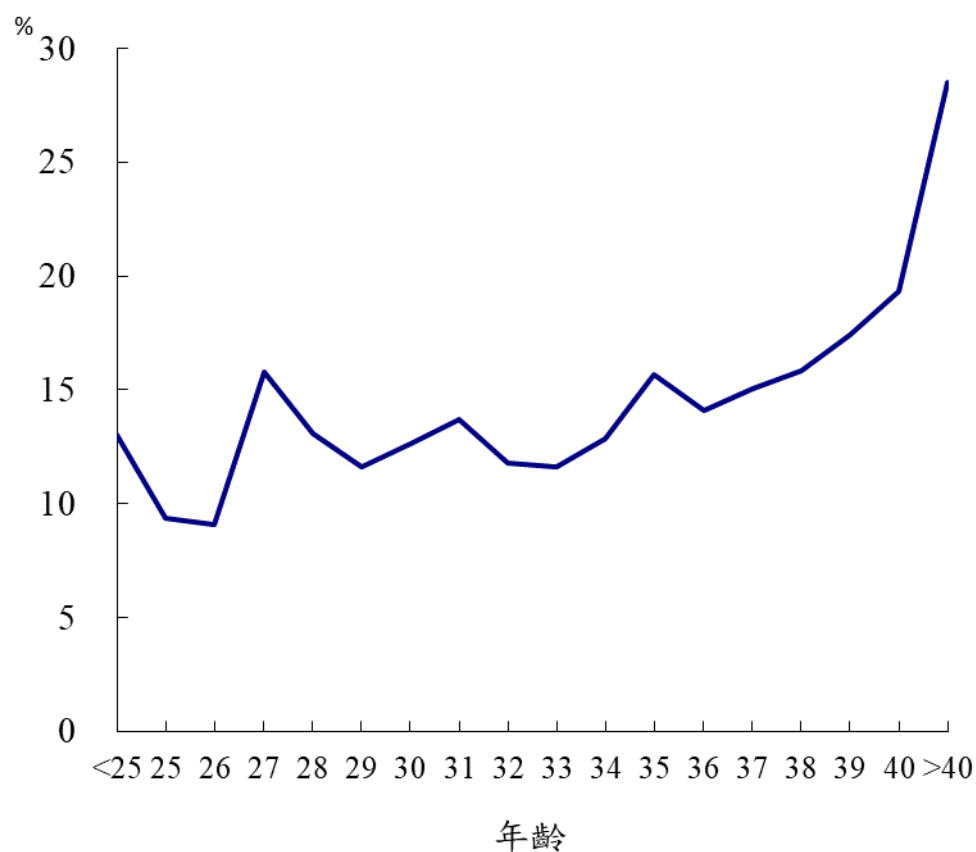
圖9 112 年本國籍使用配偶精卵之人工生殖受術妻年齡與懷孕率及活產率關係
(圖中百分比之分母為 52,827 治療週期數)



二、本國籍使用配偶精卵之各年齡流產率

本國籍使用配偶精卵之人工生殖植入胚胎懷孕後，平均自然流產率 16.8%（自然流產率=自然流產週期數/懷孕週期數），受術妻年齡與自然流產率之關係為：36 歲以後，自然流產率隨年齡增加而增加，年齡大於 40 歲的平均自然流產率為 28.5%（圖 10）。其年齡小於 25 歲和年齡大於 40 歲者，由於單一年齡週期數過少，故將年齡採合併計算方式統計。

圖10 112 年本國籍使用配偶精卵之人工生殖植入胚胎懷孕後受術妻年齡與自然流產率的關係
（圖中百分比之分母為 11,840 本國籍使用配偶精卵之植入胚胎懷孕週期數）

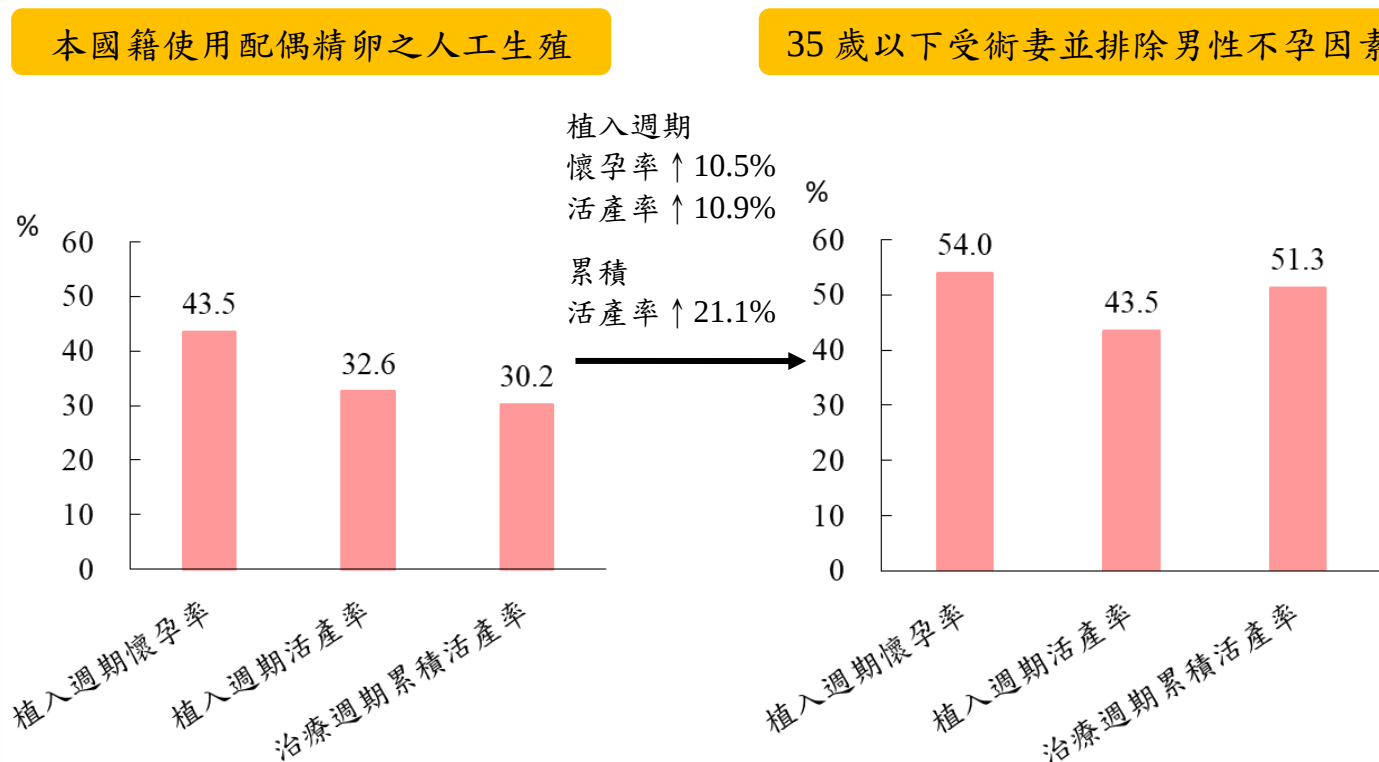


三、本國籍使用配偶精卵之試管嬰兒人工生殖懷孕率與活產率

本國籍使用配偶精卵之試管嬰兒人工生殖 52,804 治療週期中，其植入週期共 27,194 週期，有懷孕的計 11,834 週期，有活產的計 8,858 週期。其植入週期懷孕率為 43.5%，植入週期活產率為 32.6%，治療週期累積活產率為 30.2%。

若針對 35 歲以下受術妻，排除男性因素而不孕的個案，其植入週期懷孕率提高到 54.0%，植入週期活產率提高到 43.5%，而治療週期累積活產率提高到 51.3%（圖 11）。

圖11 112 年本國籍使用配偶精卵之試管嬰兒人工生殖與排除男性不孕因素之 35 歲以下受術妻施行試管嬰兒之成功率比較



四、胚胎植入數與活產率

(一) 植入胚胎數

112 年本國籍使用配偶精卵人工生殖之 27,205 植入週期數中（含 4,184 植入新鮮胚胎週期及 23,021 植入冷凍胚胎週期），其使用配偶精卵之人工生殖植入週期，植入 2 個（含）以下胚胎者占 94.2%（圖 12），依受術妻年齡區分比較，35 歲（含）以下植入 2 個以下胚胎者占 96.9%，植入單一胚胎占 78.7%（圖 13）；36 歲（含）以上植入 2 個以下胚胎者 92.9%，植入單一胚胎占 32.1%（圖 14），受術妻年齡 35 歲（含）以下者，植入單一胚胎占比高於 36 歲（含）以上者。

圖 12 112 年本國籍使用配偶精卵之人工生殖受術妻胚胎植入數百分比

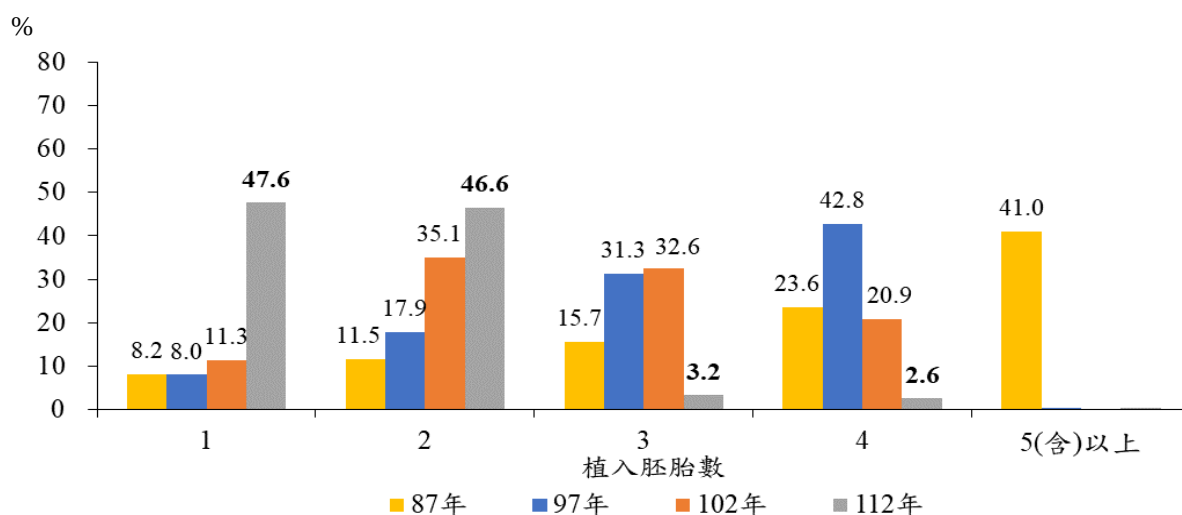


圖 13 112 年本國籍使用配偶精卵之人工生殖 35 歲(含)以下受術妻胚胎植入數百分比

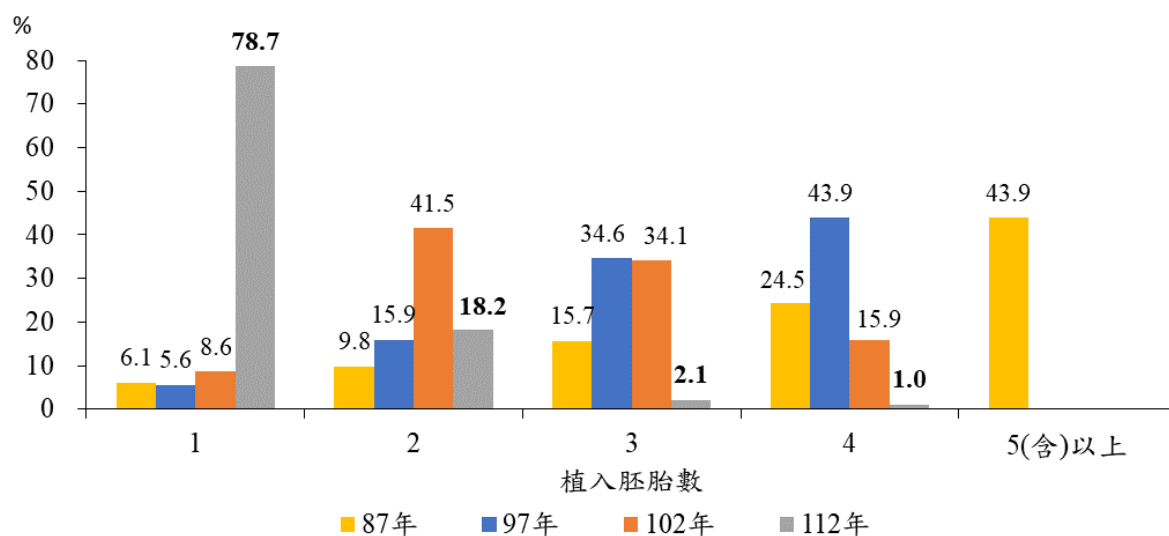
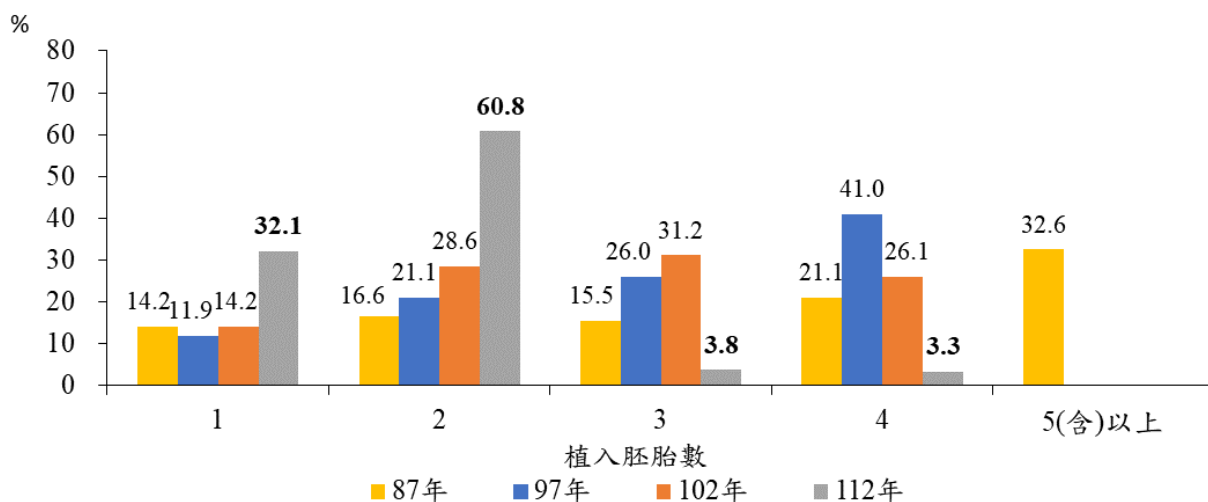


圖14 112年本國籍使用配偶精卵之人工生殖36歲(含)以上受術妻胚胎植入數百分比



(二) 活產週期植入胚胎數

本國籍使用配偶精卵之試管嬰兒人工生殖共 52,804 治療週期，活產週期總計 8,858 週期，有 54.4% 的週期植入 1 個胚胎，占最多數（圖 15）。一般而言，胚胎植入數愈多，產生雙胞胎或多胞胎的機率也相對較高。依植入胚胎數進行活產率統計，植 1 個胚胎的活產率為 36.9%，植入 2 個胚胎為 29.3%（圖 16）。相對而言植入多個胚胎產生多胞胎的比例也較高，植入 2 個（含）以上胚胎的多胞胎率達 27.2%（圖 17）。

圖15 112年本國籍使用配偶精卵之人工生殖施行試管嬰兒，其活產週期植入胚胎數之分布（圖中百分比之分母為 8,858 活產週期數）

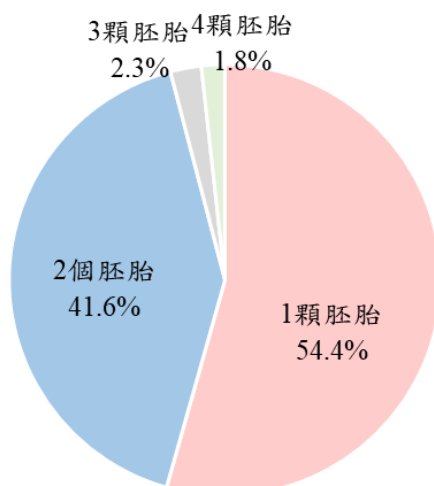


圖16 112年本國籍使用配偶精卵之人工生殖施行試管嬰兒植入胚胎數之活產率

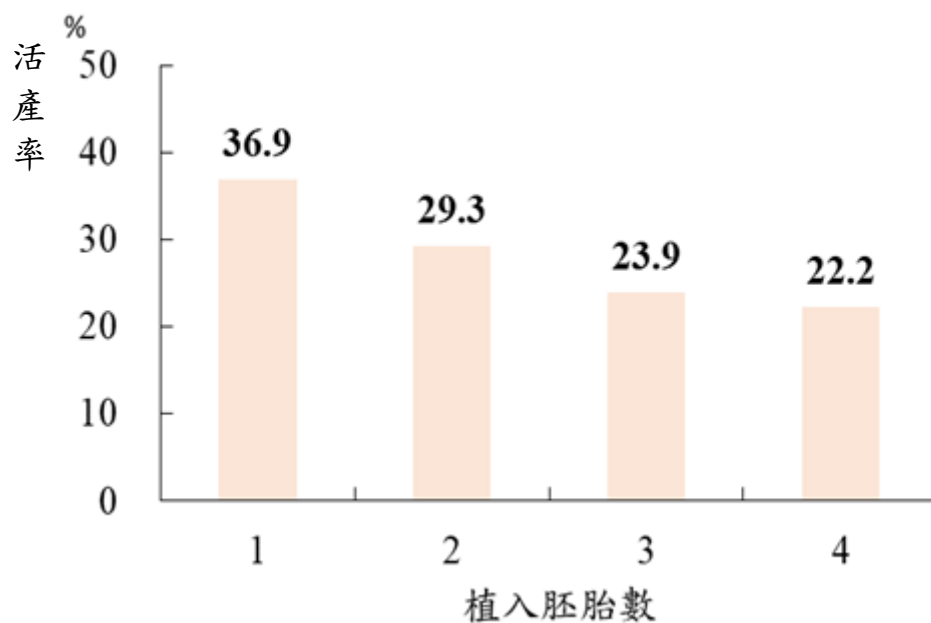
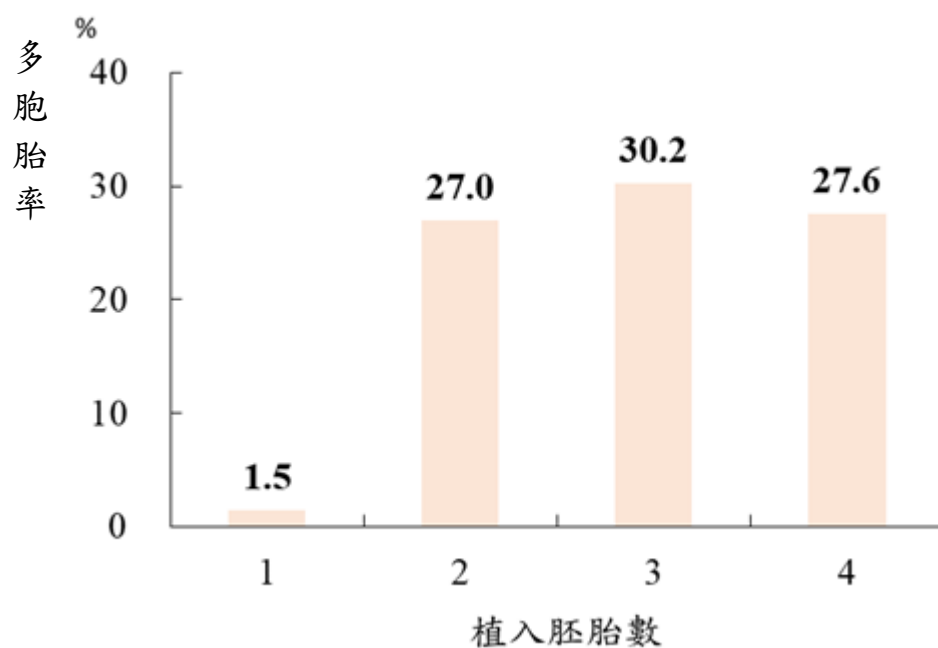


圖17 112年本國籍使用配偶精卵之人工生殖施行試管嬰兒活產週期中，植入胚胎數與多胞胎率的關係



五、本國籍使用配偶精卵之試管嬰兒人工生殖出生嬰兒狀況及累積活產率

本國籍使用配偶精卵之試管嬰兒人工生殖活產結果統計中，單胞胎占 86.8%，雙胞胎占 13.1%，三胞胎則占 0.1%（圖 18）。

本國籍使用配偶間精卵治療週期累積活產率為 31.3%，若針對未滿 38 歲受術妻，治療週期累積活產率則為 50.4%（圖 19）。

圖18 112 年本國籍使用配偶精卵之試管嬰兒人工生殖活產胎數百分比
（圖中百分比之分母為 8,858 活產週期）

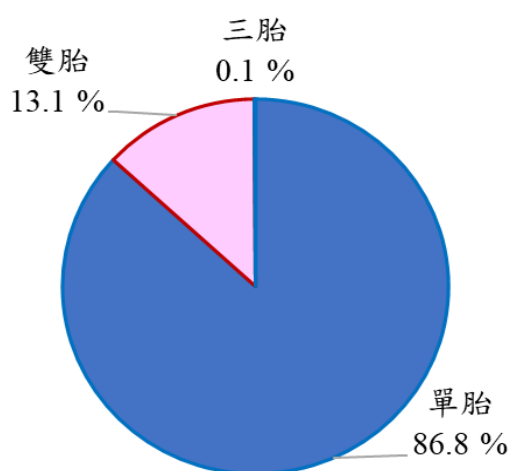
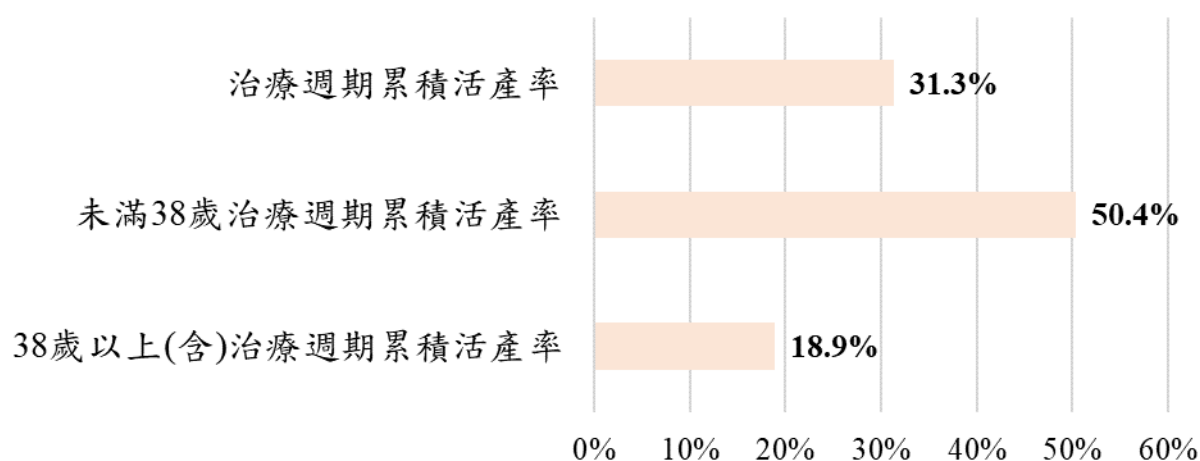


圖19 112 年本國籍使用配偶精卵之治療週期累積活產率百分比



六、本國籍使用配偶精卵植入新鮮胚胎及冷凍胚胎之人工生殖情形比較

本國籍使用配偶精卵之人工生殖治療週期中，將植入新鮮胚胎共 4,184 週期與植入冷凍胚胎共 23,021 週期進行比較，經統計結果，植入新鮮胚胎與冷凍胚胎週期之懷孕率分別為 27.3% 及 46.5%；其活產率分別為 17.8% 及 35.3%（圖 20），植入胚胎種類分別和懷孕與活產結果具有相關性。

懷孕率與活產率和受術妻的年齡明顯相關，特別是年齡超過 40 歲的受術妻，其成功率呈現明顯下降。依年齡分析比較，小於 35 歲者植入新鮮胚胎及冷凍胚胎懷孕率分別為 39.0% 及 55.1%，但超過 40 歲之懷孕率僅有 14.6% 及 28.2%；而植入新鮮胚胎週期活產率更是由小於 35 歲之 28.1%，下降至大於 40 歲之 7.2%，植入冷凍胚胎週期活產率則由 44.6% 降低到 17.0%（圖 21）。

圖 20 112 年本國籍使用配偶精卵之人工生殖植入新鮮胚胎及冷凍胚胎之成功率比較
（圖中百分比之分母分別為新鮮胚胎植入週期數 4,184 週期、冷凍胚胎植入週期數 23,021 週期）

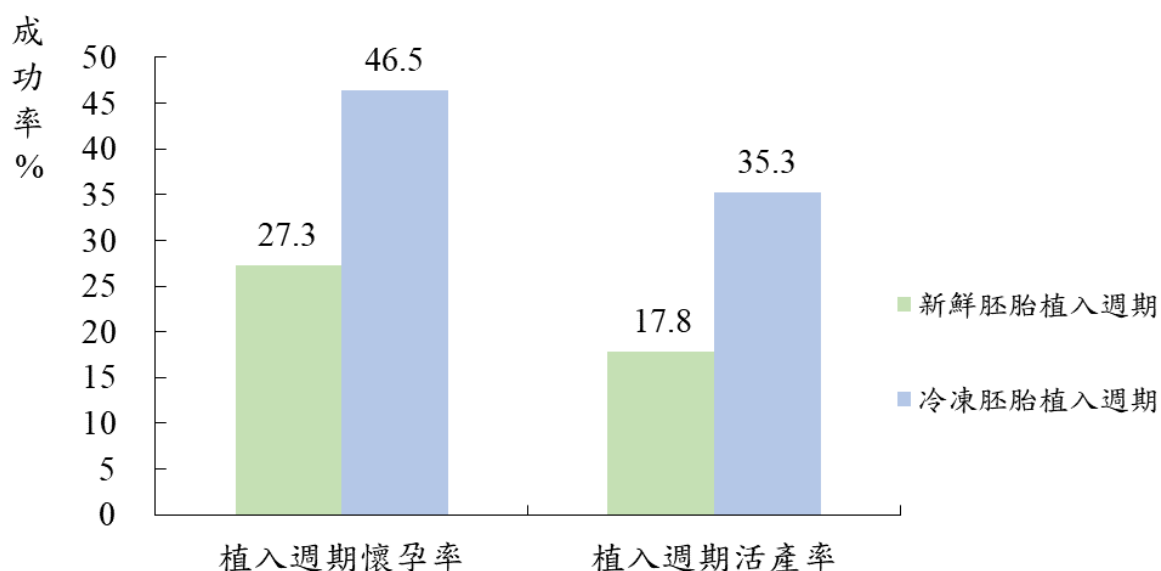
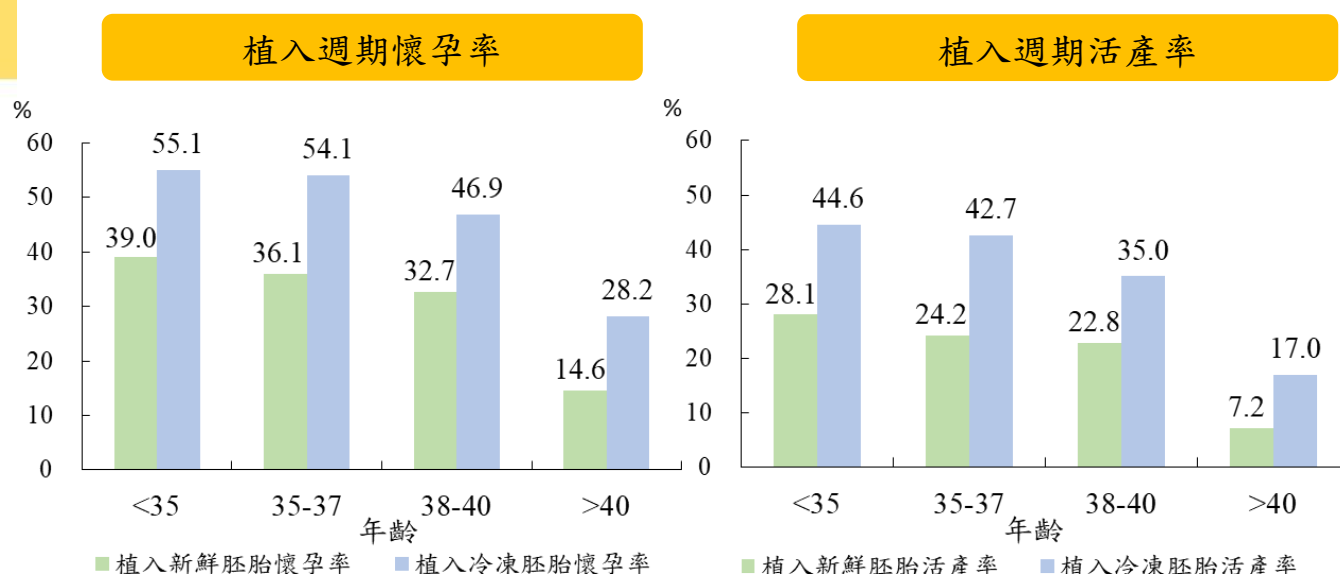
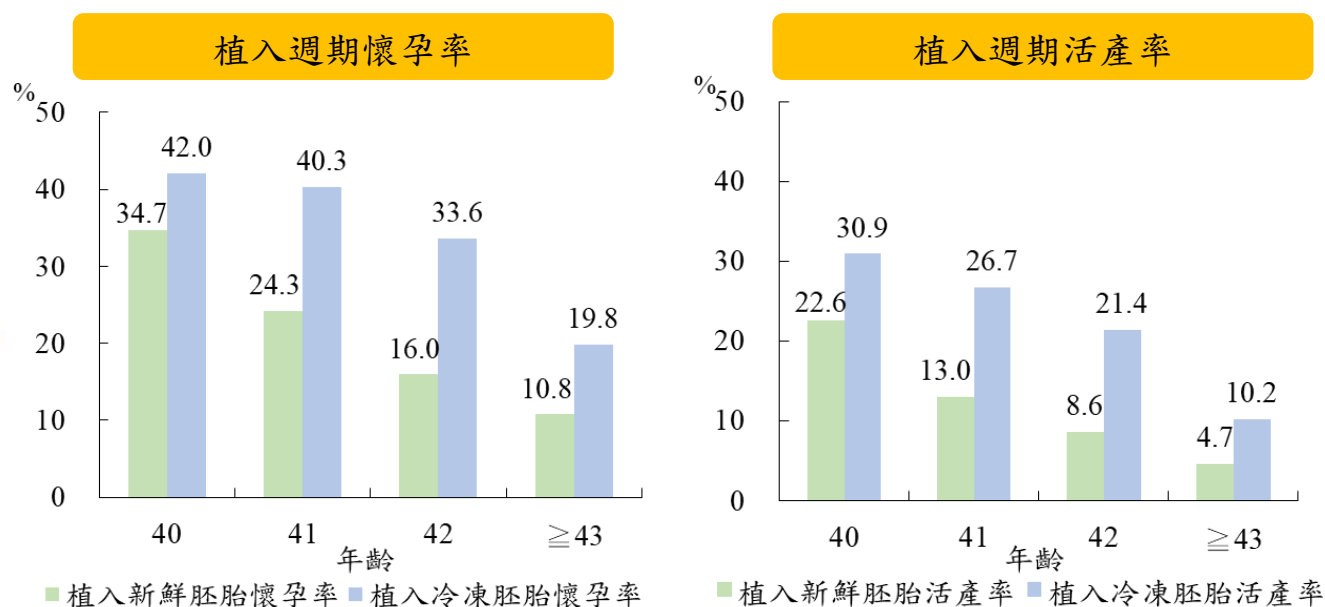


圖21 112年本國籍使用配偶精卵之人工生殖植入新鮮胚胎及冷凍胚胎之受術妻年齡別成功率



以受術妻年齡在 40 歲（含）以上者（共 9,248 植入週期）進行分析，年齡 40 歲之植入新鮮胚胎及冷凍胚胎週期懷孕率分別為 34.7%及 42.0%，但其活產率卻只有 22.6%及 30.9%。42 歲以後，植入週期成功率明顯下降，43 歲以上植入新鮮胚胎及冷凍胚胎週期懷孕率為 10.8%及 19.8%，而其活產率僅剩 4.7%及 10.2%（圖 22）。整體而言，各年齡層植入冷凍胚胎週期之懷孕率及活產率，均較植入新鮮胚胎週期為高。

圖22 112年本國籍使用配偶精卵之人工生殖植入新鮮胚胎及冷凍胚胎之受術妻年齡大於(含)40歲者之年齡別成功率



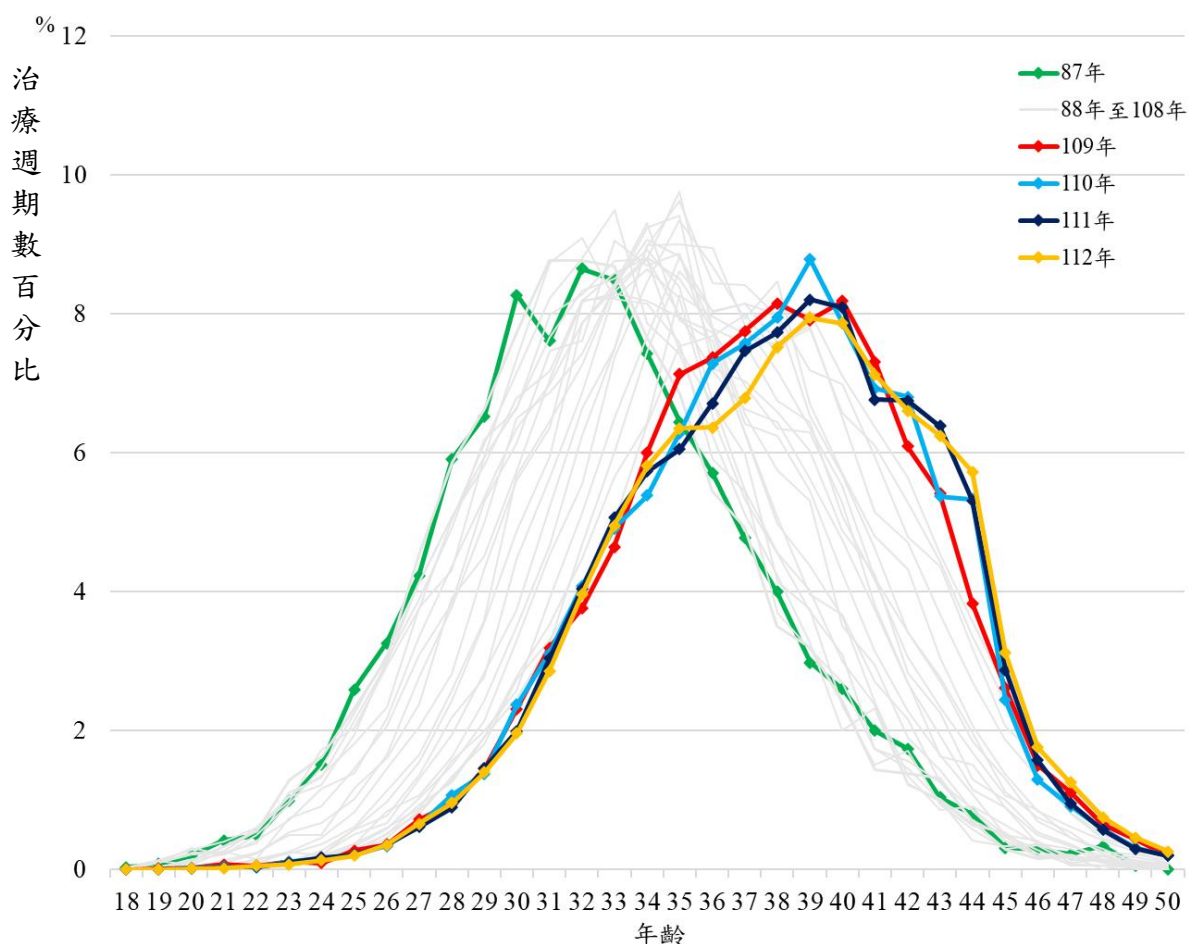
第四章 人工生殖趨勢 (87 年-112 年)

第一節、人工生殖治療週期趨勢

一、治療者之年齡

109 至 112 年接受人工生殖受術妻之年齡較 87 年高，109 年至 112 年之年齡中位數皆為 38 歲，而年齡平均數逐漸上升，由 109 年平均年齡為 37.8 歲，上升至 112 年的 38.2 歲（圖 23）。

圖23 87 年至 112 年人工生殖受術妻之年齡分布



二、治療週期數、活產週期數與活產嬰兒數

比較 87 年至 112 年接受人工生殖治療之週期數、活產週期數以及活產嬰兒數，除 92 年可能受到嚴重急性呼吸道症候群（SARS）疫情影響，接受治療的週期有明顯減少外，於 90 到 93 年均維持於 6,500 週期至 6,700 週期之間，94 年後則超過 7,200 週期，並逐年增加。109 年又因嚴重特殊傳染性肺炎（COVID-19）疫情緣故，降低民眾就醫意願，加上 109 年 3 月 19 日起進行邊境管制，禁止外籍旅客來臺，治療週期數為 38,289 週期，相對於 108 年的 44,256 週期減少了 13.5%。自 110 年 7 月 1 日實施擴大人工生殖補助後，治療週期從 110 年 49,652 週期逐年提升，112 年治療週期數為 58,557 週期，較 109 年增加 52.9%（表 12）。

活產週期數在 93 年以前，維持於 1,500 週期至 1,800 週期間，94 年後則超過 2,000 週期，可歸因於 94 年以後接受人工生殖治療週期數的增加，以及國內人工生殖技術之成熟所致。活產嬰兒數於 87 年至 96 年，每年約有 2,300 到 2,900 名新生兒誕生；97 年到 103 年每年約誕生 3,100 至 6,900 名新生兒，104 年到 111 年每年誕生新生兒數介於 8,254 至 11,549 名（其中 109 年受 COVID-19 疫情影響而下降），112 年已增加至 11,658 位，較 111 年增加了 109 名新生兒（表 12）。

另為了解本國籍人工生殖治療使用概況，自 97 年後另列出本國籍（任一方為本國籍者即列入）人工生殖受術夫妻之治療週期數、活產週期數及活產嬰兒數。112 年本國籍治療週期數共 55,119 週期，較 111 年 57,759 週期下降；112 年活產週期數 9,504 週期，較 111 年的 9,848 週期降低 344 週期，活產嬰兒數也由 111 年的 11,348 位下降至 112 年的 10,833 位，減少 515 名活產嬰兒（表 12 及圖 24）。

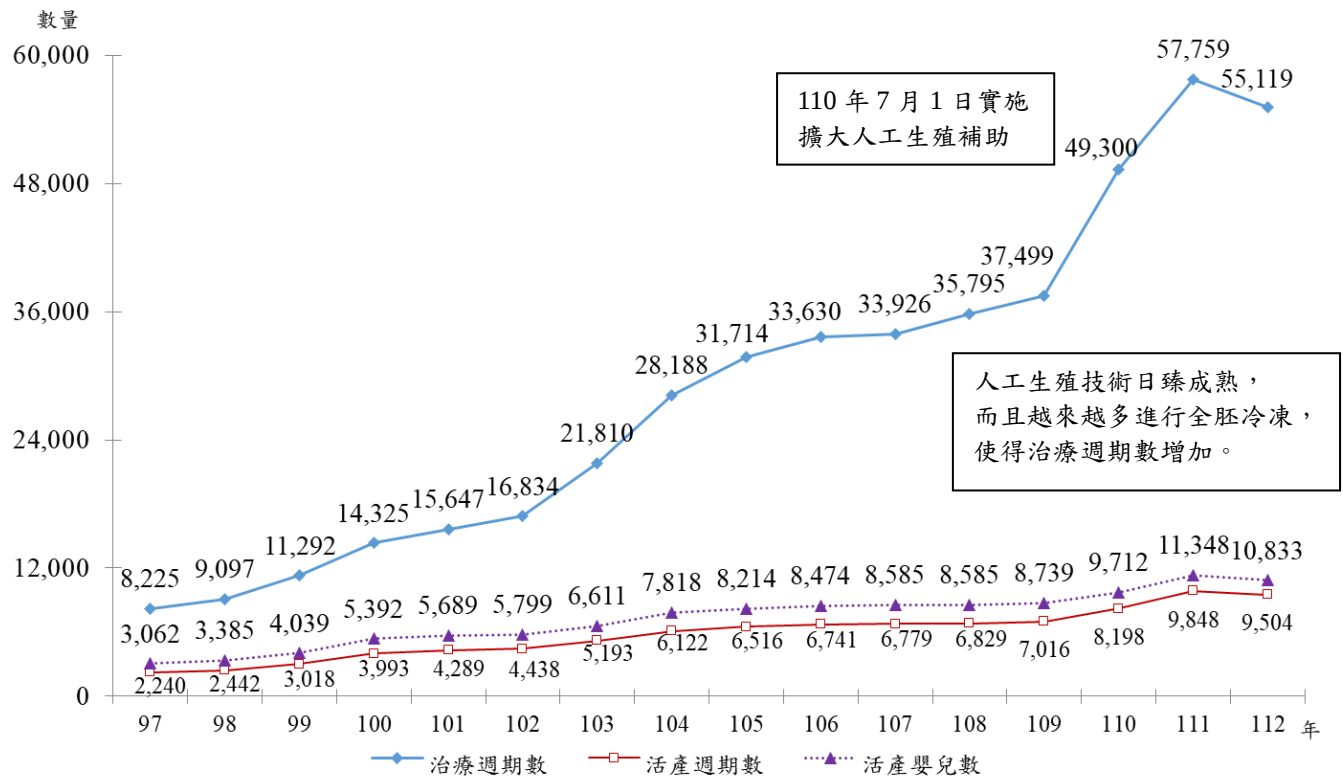
表12 87 年至 112 年人工生殖治療週期數、活產週期數與活產嬰兒數

年	治療週期數 (單位：週期)	活產週期數 (單位：週期)	活產嬰兒數 ^{註1} (單位：個)	本國籍 ^{註2}		
				治療週期數 (單位：週期)	活產週期數 (單位：週期)	活產嬰兒數 (單位：個)
87	7,146	1,585	2,317			-
88	6,965	1,586	2,271			-
89	7,037	1,663	2,357			-
90	6,458	1,645	2,381			-
91	6,622	1,722	2,466			-
92	5,831	1,580	2,270			-
93	6,791	1,849	2,598			-
94	7,346	2,037	2,841			-
95	7,281	2,021	2,791			-
96	7,945	2,139	2,924			-
97	8,360	2,268	3,098	8,225	2,240	3,062
98	9,266	2,495	3,464	9,097	2,442	3,385
99	11,517	3,072	4,122	11,292	3,018	4,039
100	14,645	4,060	5,486	14,325	3,993	5,392
101	16,041	4,394	5,825	15,647	4,289	5,689
102	17,393	4,585	5,988	16,834	4,438	5,799
103	22,684	5,387	6,857	21,810	5,193	6,611
104	29,720	6,454	8,254	28,188	6,122	7,818
105	34,486	7,132	8,988	31,714	6,516	8,214
106	37,849	7,654	9,590	33,630	6,741	8,474
107	39,840	8,113	10,236	33,926	6,779	8,585
108	44,256	8,583	10,678	35,795	6,829	8,585
109	38,289	7,187	8,944	37,499	7,016	8,739
110	49,652	8,249	9,774	49,300	8,198	9,712
111	58,476	10,012	11,549	57,759	9,848	11,348
112	58,557	10,209	11,658	55,119	9,504	10,833
總計	560,453	117,681	149,727			

註：1.以當年度治療者為統計對象，故活產嬰兒數非以當年度全國人工生殖出生嬰兒數計算。

2.本國籍定義為人工生殖受術夫妻任一方或雙方為本國籍者，排除受術夫妻皆為外國籍者。

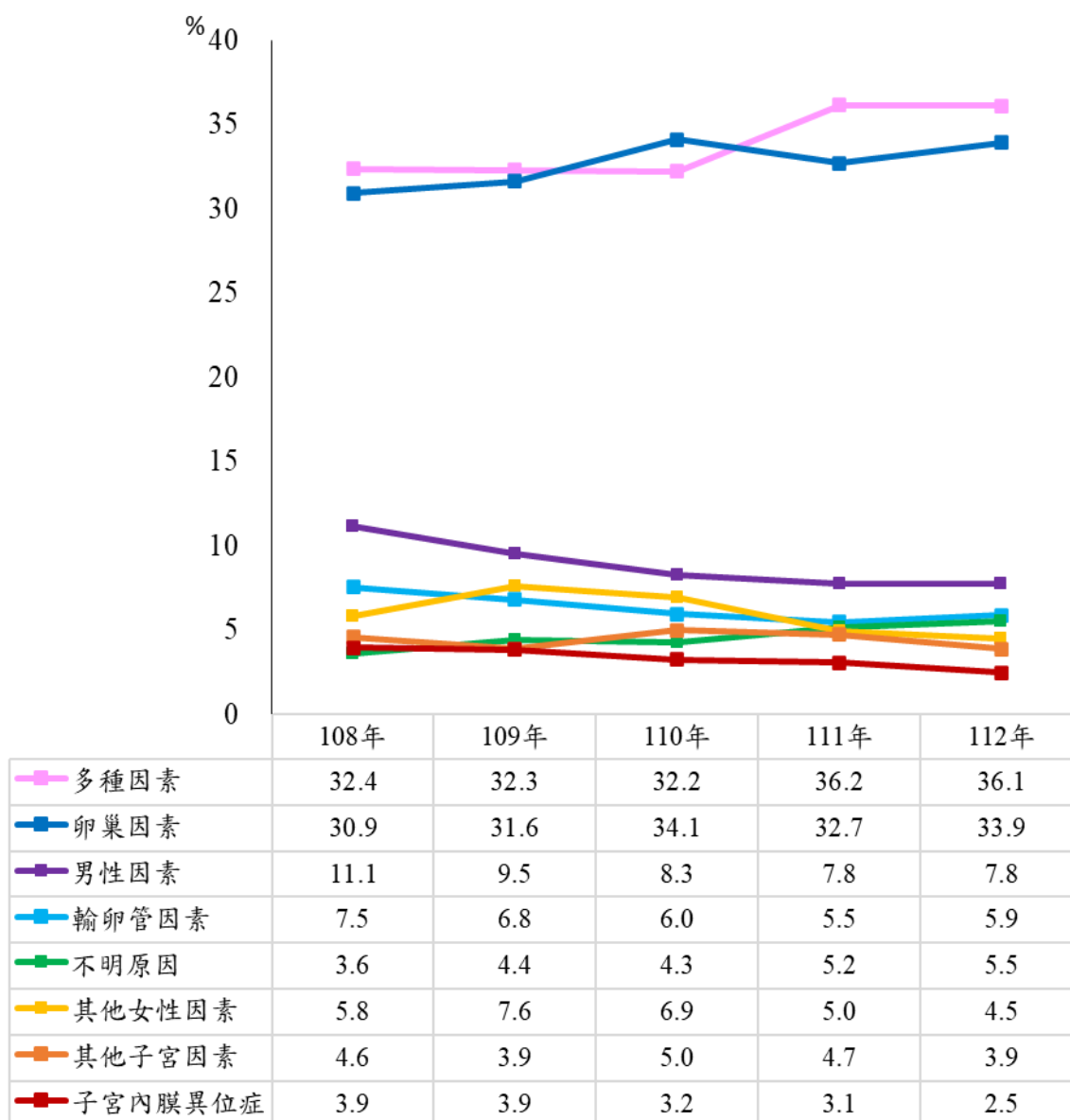
圖24 97 年至 112 年本國籍人工生殖治療週期數、活產週期數與活產嬰兒數



三、本國籍受術夫妻之不孕原因

104 年修正人工生殖資料及管理辦法，將不孕原因自五項細分為八項，增列卵巢因素、子宮內膜異位症及其他子宮因素。近 5 年不孕原因前三位為多種因素、卵巢因素及男性因素，112 年以多種因素為最高（圖 25）。

圖25 近 5 年（108 年至 112 年）本國籍人工生殖之不孕原因百分比



四、本國籍人工生殖治療週期懷孕率與活產率

97 年至 112 年本國籍人工生殖之治療週期懷孕率及活產率以 100 年 37.5%及 27.9%達最高，其後呈下降趨勢，112 年分別為 23.0%及 17.2%（圖 26）。因近年人工生殖越來越多進行全胚冷凍，使得治療週期數增加，但該週期並未進行植入，故以治療週期累積懷孕率、治療週期累積活產率較能真實呈現人工生殖技術品質。

治療週期累積懷孕率由 97 年的 41.3%，略升至 107 年的 46.6%，而後略微降低，由 108 年 44.9%降至 112 年 41.9%；治療週期累積活產率則由 97 年的 30.8%，略升至 107 年 34.8%，之後略降至 112 年的 31.4%（圖 27）。

圖26 97 年至 112 年本國籍人工生殖之治療週期懷孕率及活產率

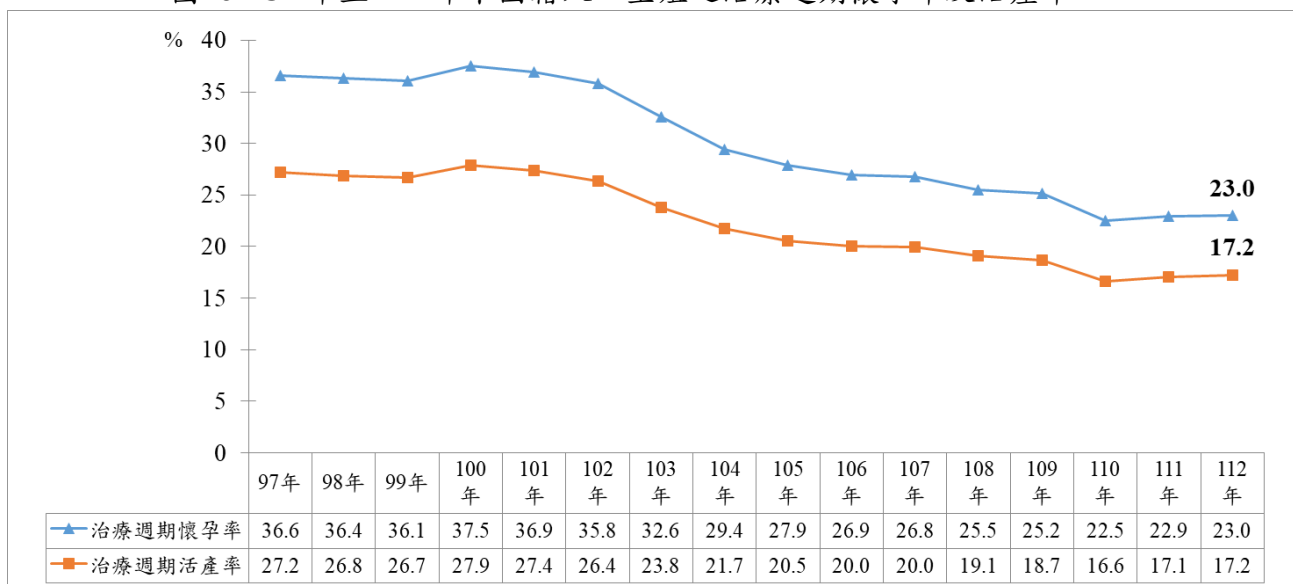
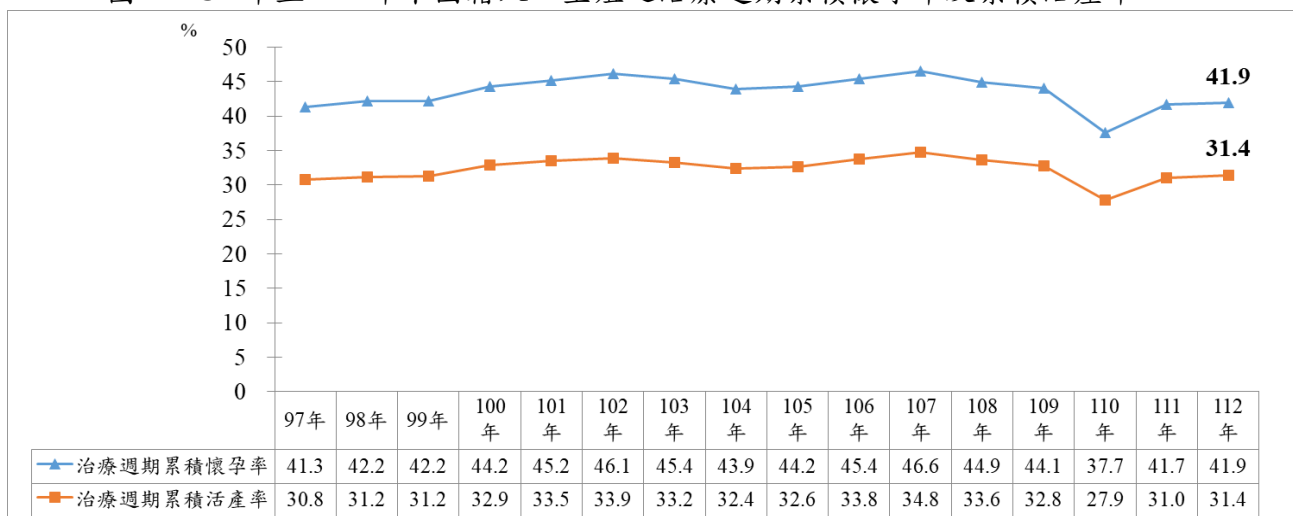


圖27 97 年至 112 年本國籍人工生殖之治療週期累積懷孕率及累積活產率



第二節、本國籍植入週期成功率趨勢

本國籍植入新鮮胚胎的懷孕率及活產率，由 97 年 40.0%及 29.9%，降低為 112 年 28.5%及 18.9%。植入冷凍胚胎的懷孕率及活產率由 97 年 38.5%及 28.2%上升至 109 年 50%及 37.6%，112 年較 109 年略為下降，分別為 46.9%及 35.6%。98 年以後植入冷凍胚胎之懷孕率及活產率，皆高於植入新鮮胚胎之懷孕率及活產率（圖 28 及圖 29）。

圖28 97 年至 112 年本國籍植入新鮮胚胎與冷凍胚胎之植入週期懷孕率

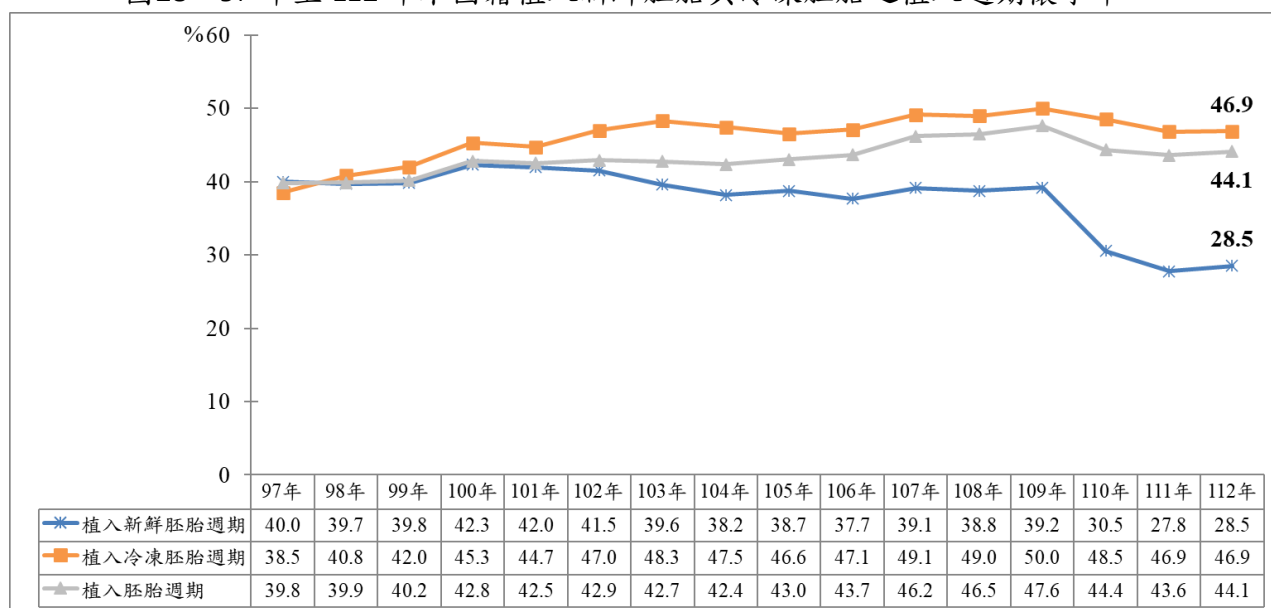
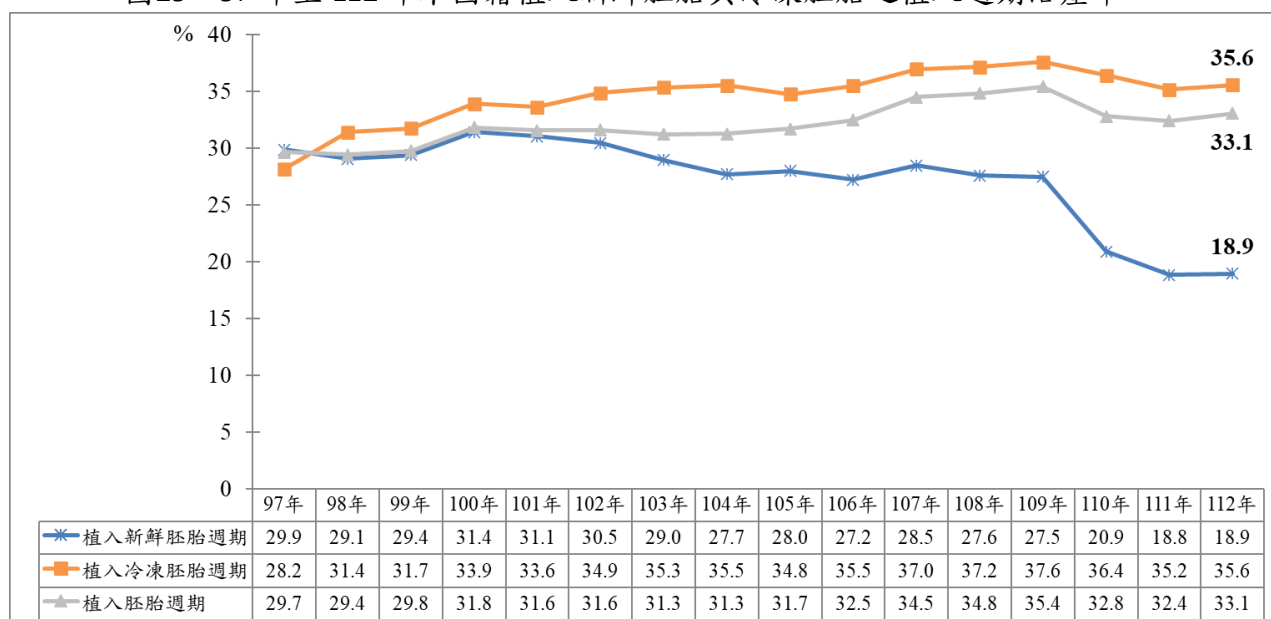
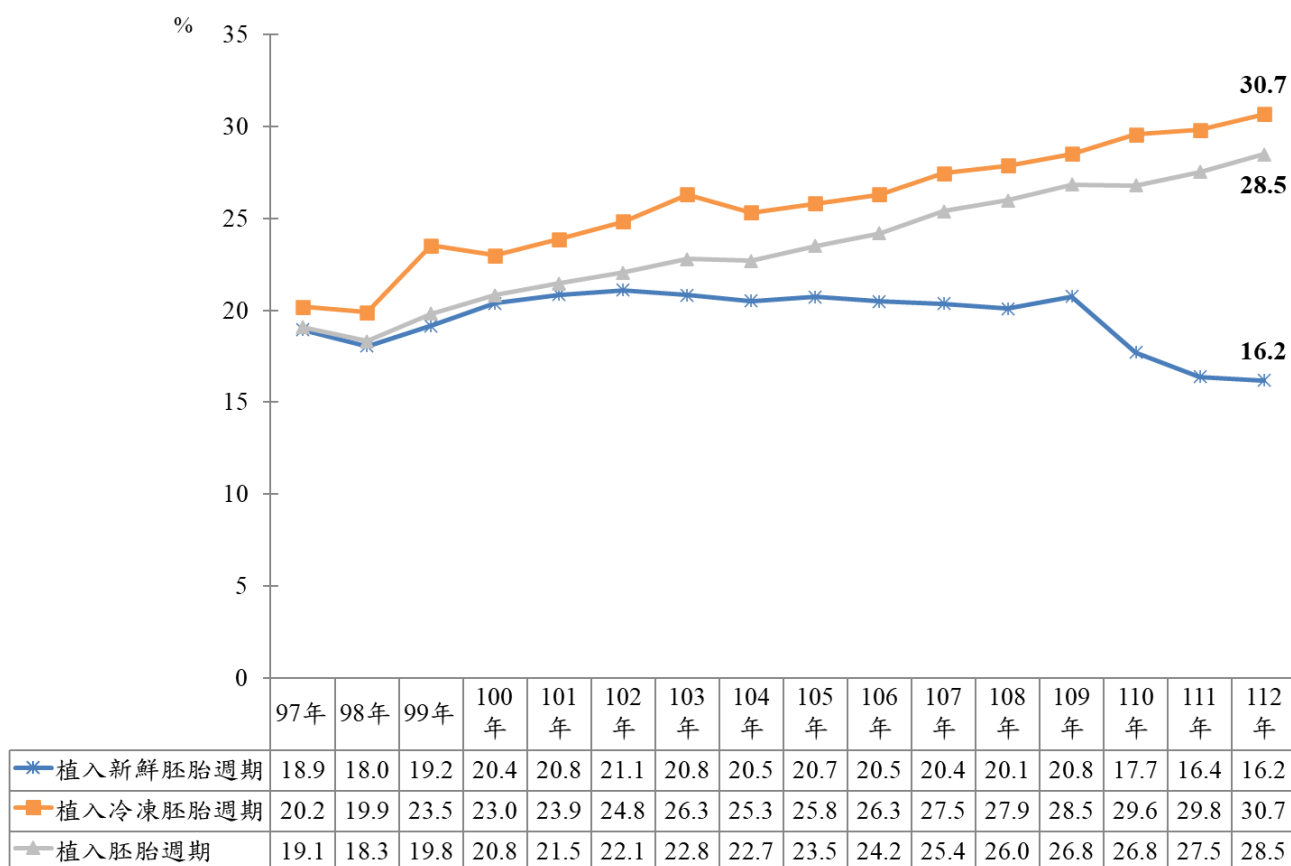


圖29 97 年至 112 年本國籍植入新鮮胚胎與冷凍胚胎之植入週期活產率



植入週期單胎活產率自 97 年呈現上升趨勢，原因為人工生殖技術的進步及配合母體調整至最佳植入狀態，而以冷凍胚胎植入者逐漸增加，冷凍胚胎植入的單胎活產率由 98 年的 19.9% 上升到 112 年的 30.7%，而植入新鮮胚胎的單胎活產率，98 年為 18.0%，109 年為 20.8%，112 年下降至 16.2%；97 年以後，植入冷凍胚胎之單胎活產率皆高於植入新鮮胚胎之單胎活產率（圖 30）。

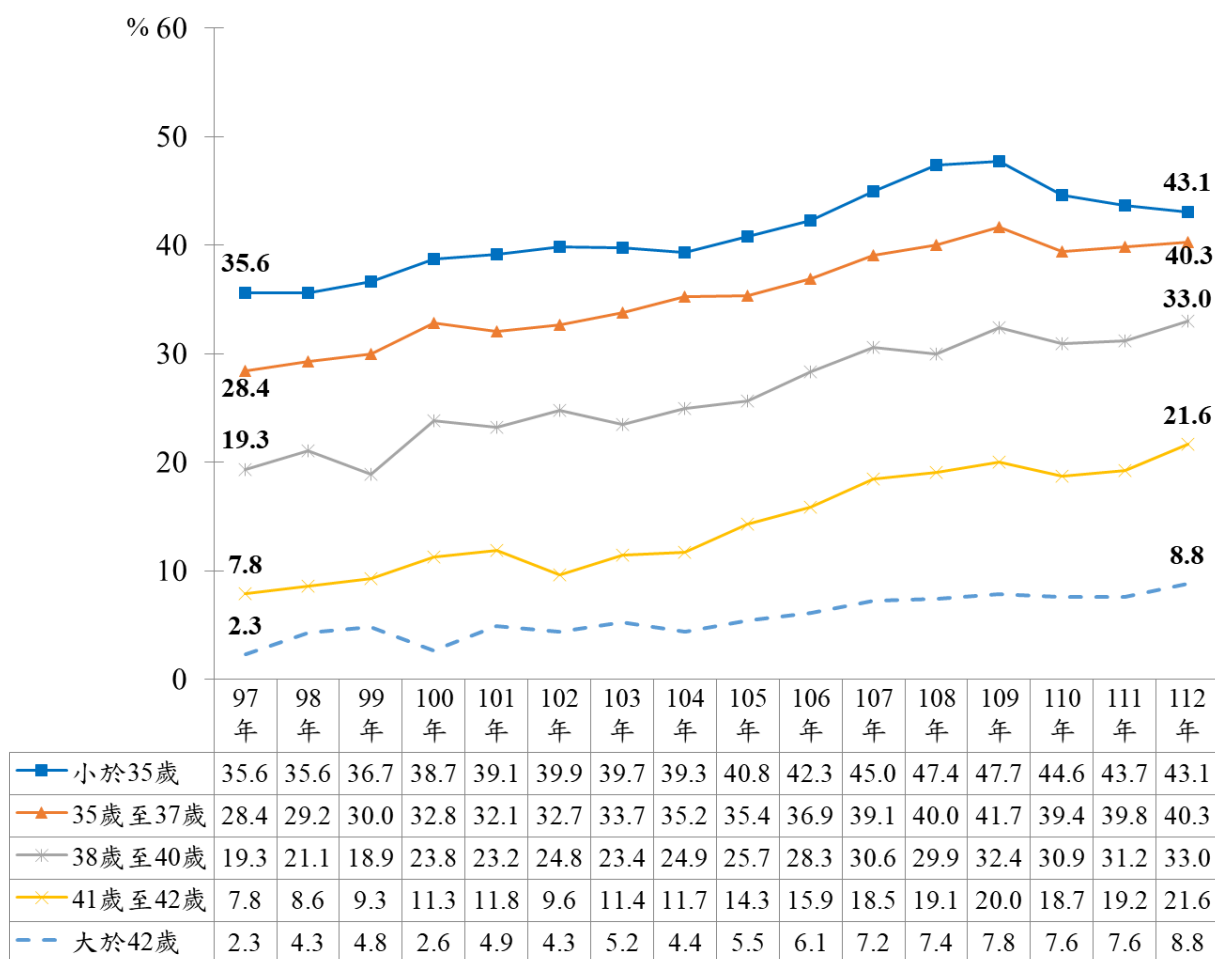
圖30 97 年至 112 年本國籍植入新鮮胚胎與冷凍胚胎之植入週期單胎活產率



第三節、本國籍各年齡層之植入週期成功率趨勢

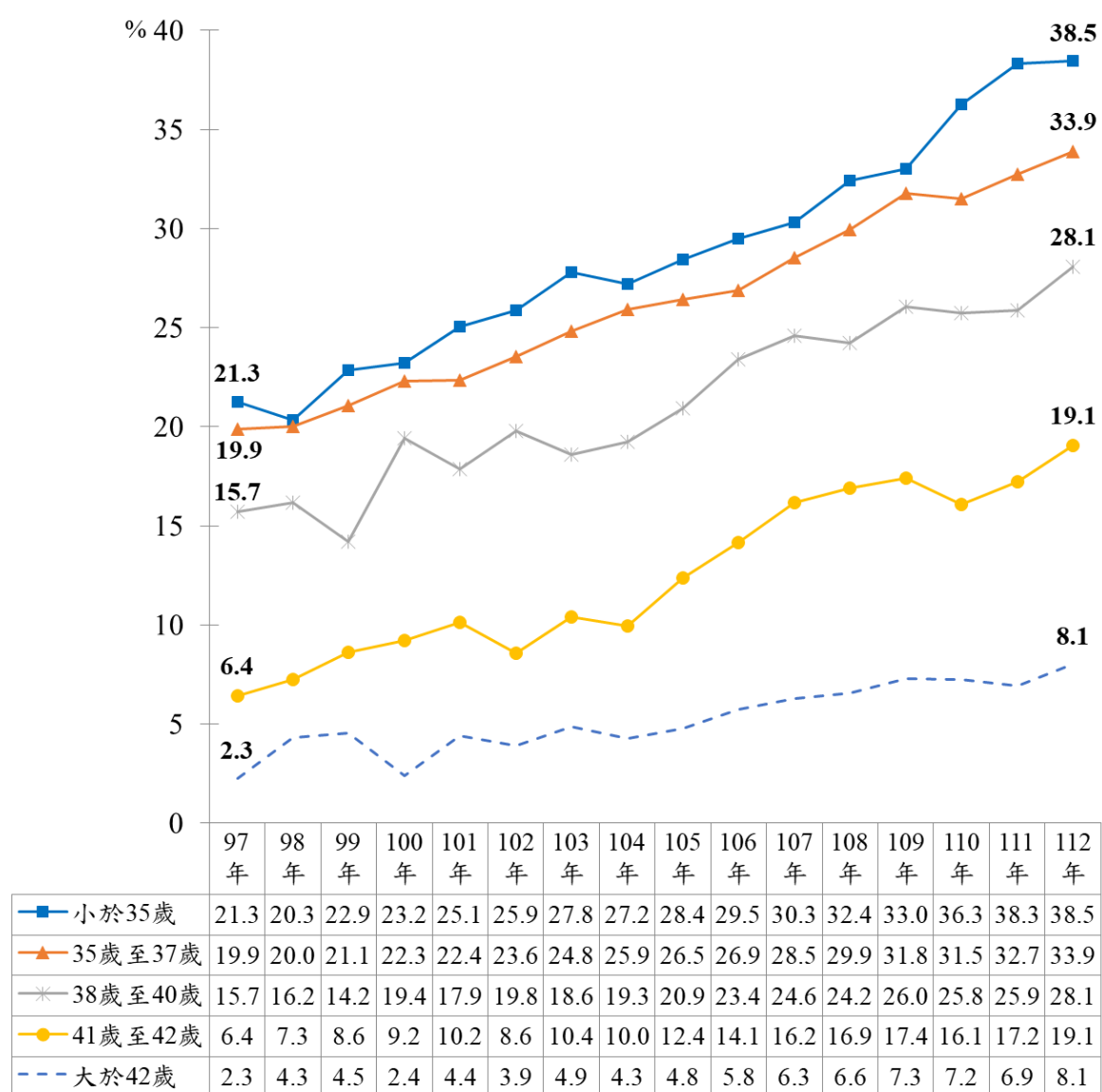
植入週期活產率使用捐贈卵子會受捐贈者年齡影響，所以僅分析使用配偶精卵人工生殖之植入週期活產率。97 年至 109 年間，各年齡層之植入週期活產率整體呈上升趨勢，而後略為下降。受術妻未滿 35 歲者之植入週期活產率，由 97 年的 35.6% 提高到 109 年的 47.7%，112 年略下降至 43.1%。與 97 年比較，112 年的植入週期活產率在 35 到 37 歲年齡層提高 11.9 百分點，於 38 到 40 歲提高 13.7 百分點，於 41 到 42 歲提高 13.8 個百分點，而年齡大於 42 歲之受術妻則提高 6.5 百分點（圖 31）。

圖31 97 年至 112 年本國籍使用配偶精卵之植入週期活產率（依受術妻年齡別區分）



受術妻年齡在未滿35歲者之植入單胎活產率由97年的21.3%提高到112年的38.5%。與97年比較，112年的植入週期單胎活產率在35到37歲年齡層提高14.0個百分點，於38到40歲提高12.4個百分點，於41到42歲提高12.7個百分點，而在年齡大於42歲之受術妻則提高5.8個百分點，另112年各年齡分組之植入單胎活產率均較111年上升（圖32）。

圖32 97年至112年本國籍使用配偶精卵之植入週期單胎活產率（依受術妻年齡別區分）

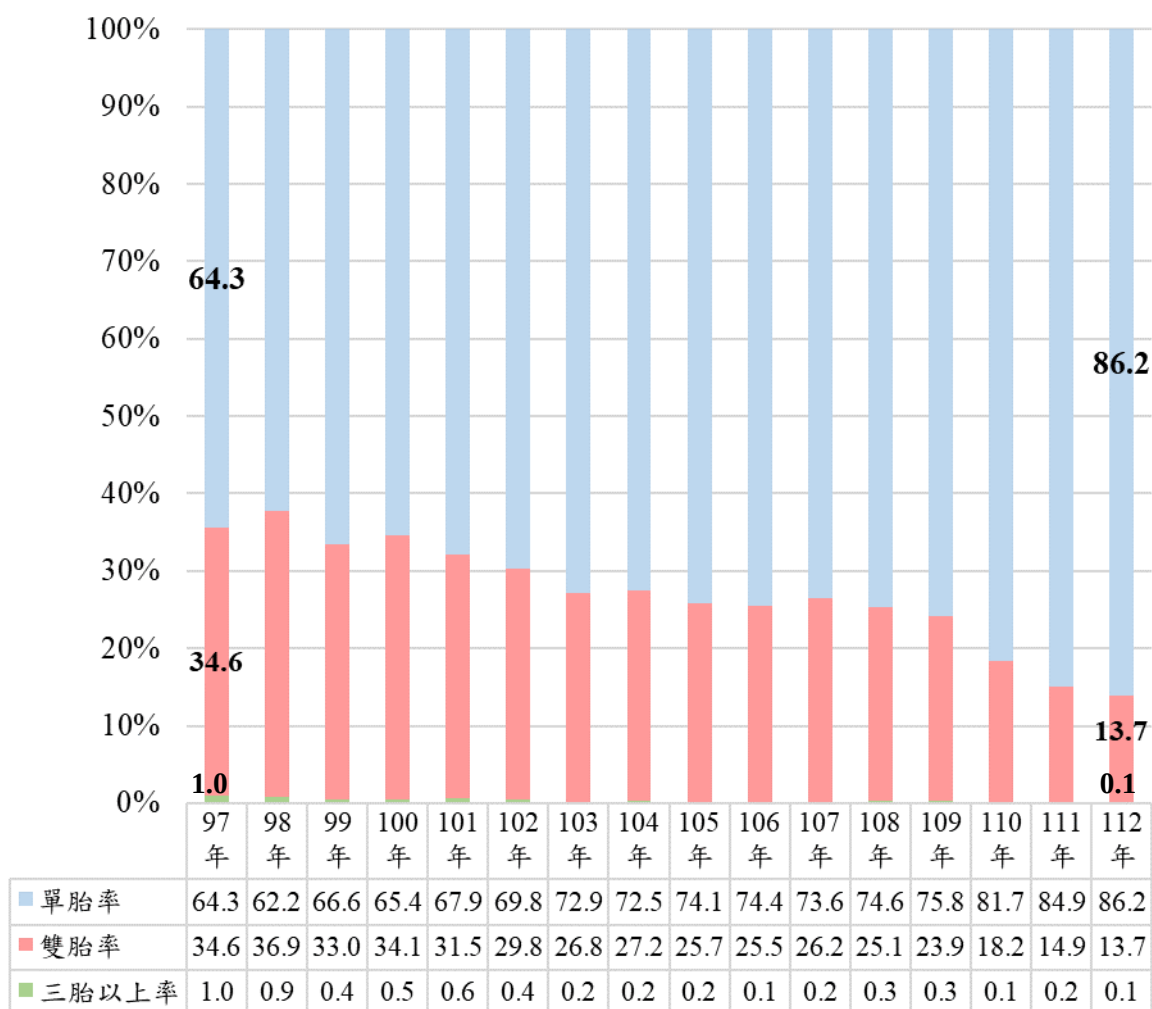


第四節、本國籍活產週期出生胎數、體重與週數

單胎率是測量成功率之重要的指標，因為單胎生產比多胞胎生產有較低的危險性，包括早產、低體重兒、先天性缺陷以及死亡等。為了有效輔導人工生殖機構減少多胞胎率，於 103 年將「未滿 35 歲之植入 2 個以下胚胎之比率」納為人工生殖機構許可監測指標之一，並於 110 年 7 月 1 日實施之人工生殖擴大補助方案，規定未滿 36 歲只能植入 1 個胚胎，36~44 歲只能植入 1~2 個胚胎，方能得到補助。

本國籍人工生殖治療之活產週期中，單胎率從 97 年 64.3% 上升至 86.2%；而多胞胎率由 35.6% 下降至 13.8%（圖 33）。

圖33 97 年至 112 年本國籍活產週期胎數百分比



本國籍人工生殖活產嬰兒中，出生體重低於 1,500 公克者，97 年占所有活產嬰兒 5.6%，112 年下降至 2.8%；1,500 公克至 2,499 公克則從 97 年 37.3% 下降至 112 年 22.6%；而大於等於 2,500 公克者，則從 97 年 57.1% 上升至 112 年 74.6% (圖 34)。另，97 年出生週數小於 37 週者占 44.4%，112 年下降至 26.2%；37 週至 41 週從 97 年占 55.6% 上升至 112 年 73.8% (圖 35)。

圖34 97 年至 112 年本國籍活產嬰兒之出生體重百分比

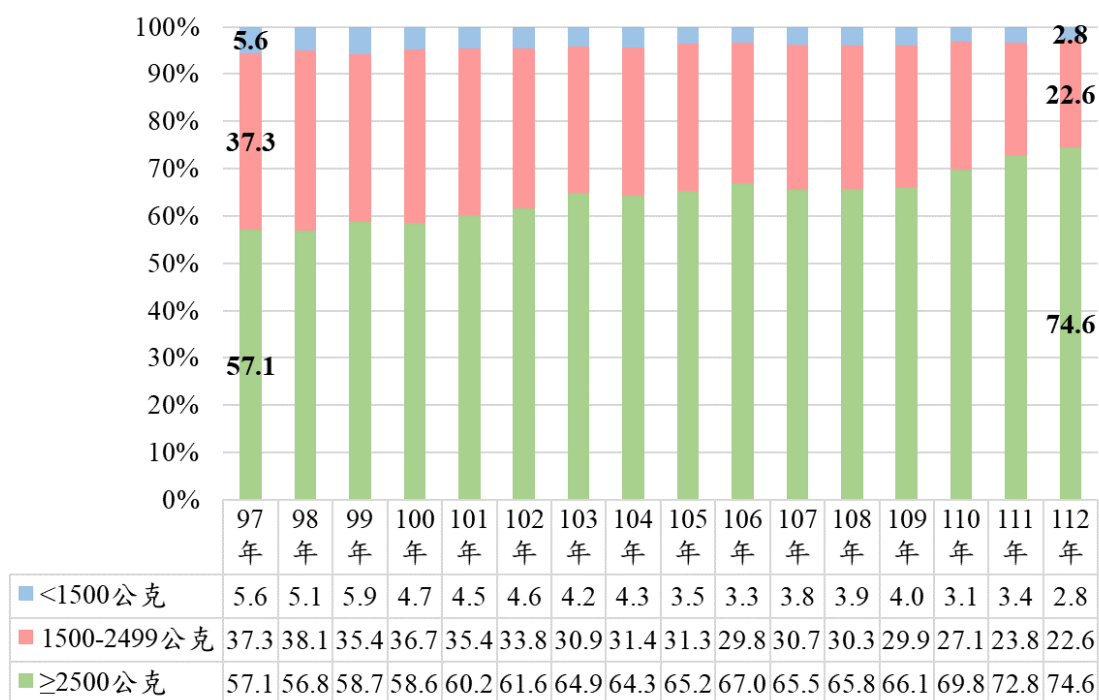
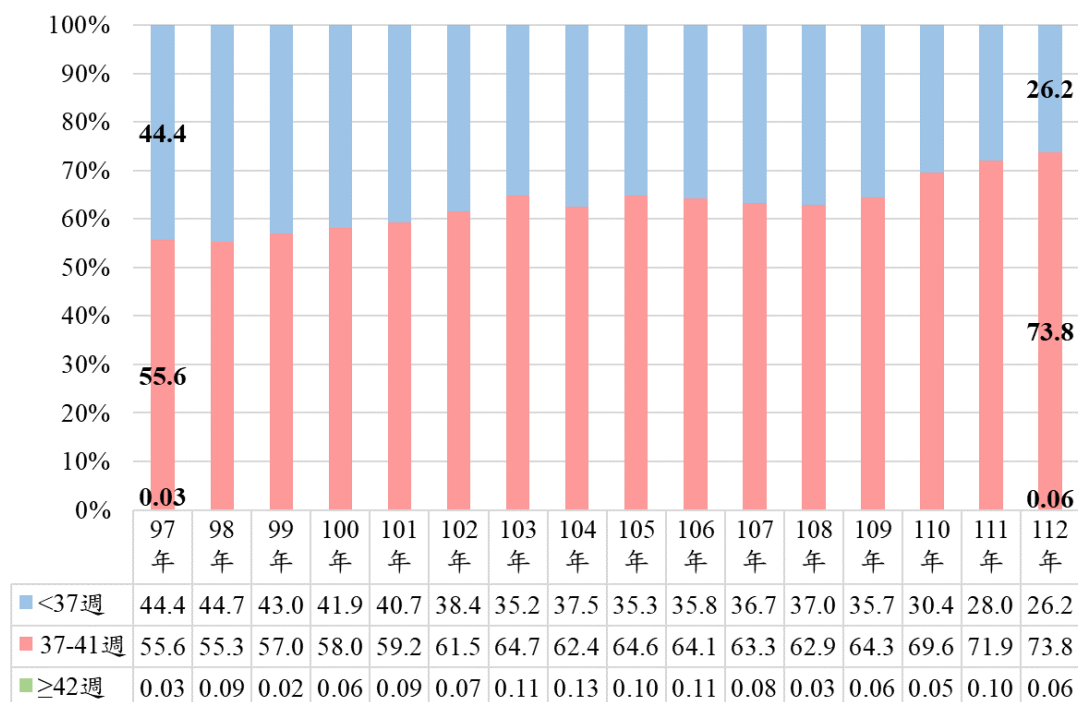


圖35 97 年至 112 年本國籍活產嬰兒之出生週數百分比



附錄1 人工生殖施行結果分析報告資料處理

一、人工生殖通報系統資料

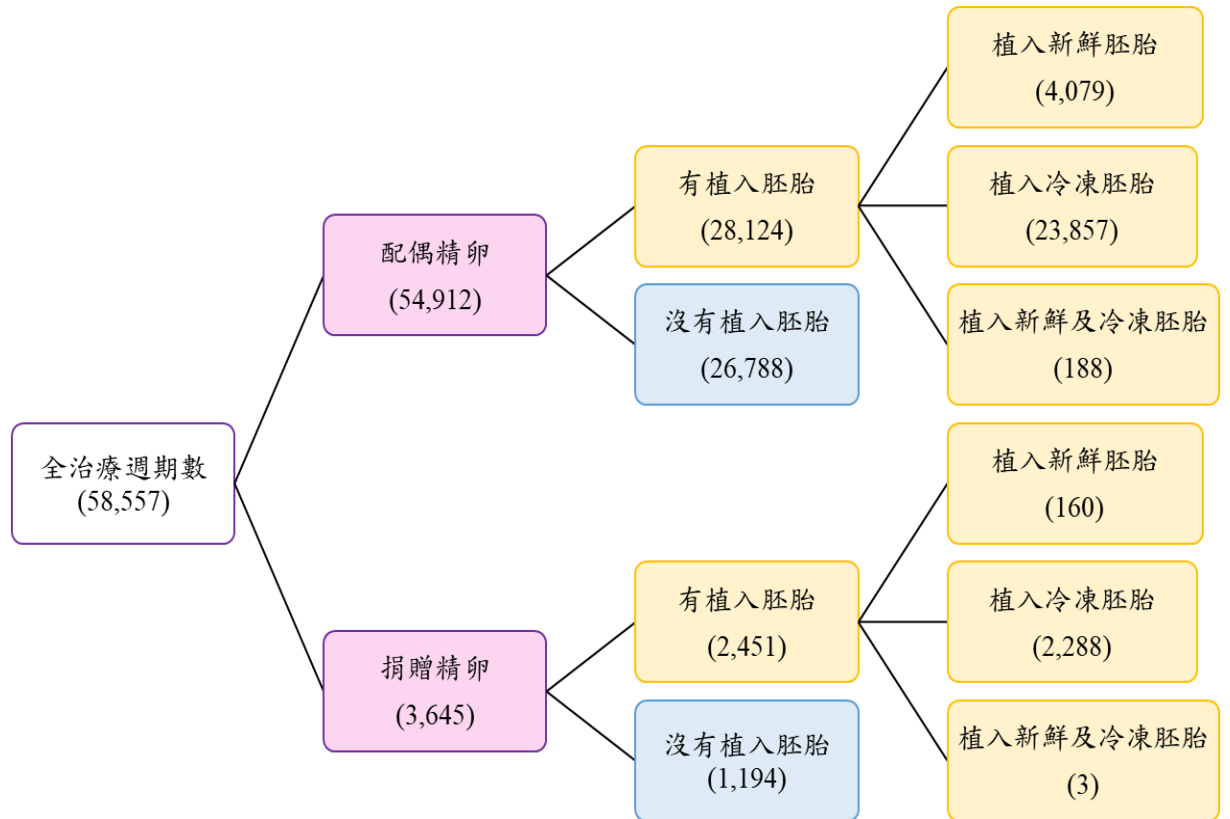
- (一) 本分析報告所使用之年度人工生殖施行通報備份資料檔，係自「人工生殖網路通報及補助申請系統」資料庫轉檔匯出，考量施術至生產歷時約10個月，加上行政作業時間，為利機構協助通報及追蹤，本報告以出版年度往前回推2年之人工生殖施行數據進行分析。以本（114）年出版之年報為例，分析112年1月1日至112年12月31日開始進行人工生殖治療週期者。
- (二) 於統計分析製表前，先進行資料正確性、邏輯性檢查與除錯，並確認匯出資料檔內容與線上系統查詢之資料相符。
- (三) 完成前項檢誤後，針對需釐清之通報資料，請人工生殖機構協助釐清病歷記載資料及督導修正資料。
- (四) 依修正結果轉檔匯出更正後之年度人工生殖施行通報資料檔。

二、資料結果之可能差異

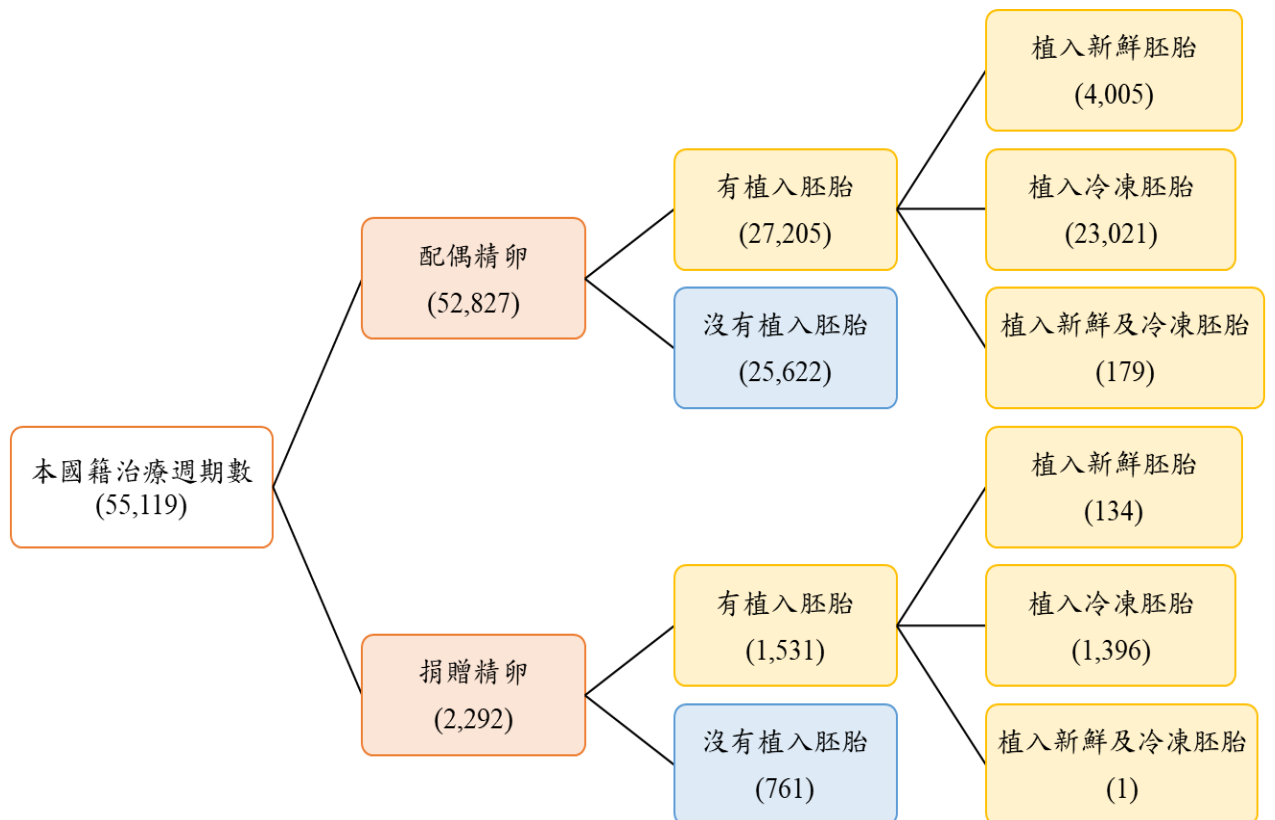
- (一) 人工生殖通報系統資料可依事後發現及在查核確認結果進行修正，歷年統計數值會因所使用資料檔之匯出時間點不同而有些微差異，本報告係以報告產製前，所能取得之最新資料進行統計製表。
- (二) 個案施行人工生殖施術後，可能未於臺灣生產等因素，導致後續失聯或拒絕回復該機構追蹤，使懷孕結果通報與實際情形有些微差異。

三、納入分析之治療週期數

(一)全部



(二)本國籍



附錄 2 112 年人工生殖統計摘要

概 廓

人工生殖方法		施術過程		不孕原因	
IVF/ET	100%	使用 ICSI	30%	輸卵管因素	6%
ZIFT/TET	<1%			卵巢因素	34%
AID	<1%			子宮內膜異位症	2%
其他方法	<1%			其他子宮因素	4%
				其他女性因素	5%
				男性因素	8%
				多種因素	36%
				不明原因	5%

懷孕成功率

週期類型	受術妻年齡				
	<35	35-37	38-40	>40	合計
人工生殖之新鮮胚胎					
治療週期數	6,497	5,629	7,560	12,226	31,912
懷孕週期百分比	4.4	5.3	4.9	2.6	4.0
活產週期百分比	3.3	3.6	3.5	1.5	2.7
植入週期數	722	815	1,122	1,771	4,430
植入週期之懷孕率	39.9	36.7	33.3	18.2	29.0
植入週期之活產率	29.4	25.0	23.4	10.3	19.5
植入週期之單胎活產率	27.0	20.6	19.7	8.5	16.6
取消百分比	90.0	86.4	86.3	87.1	87.4
平均植入胚胎數	1.2	1.6	1.8	1.9	1.7
活產週期之多胞胎百分比	8.0	17.6	16.0	17.5	14.7
人工生殖之冷凍胚胎					
治療週期數	7,207	5,784	6,098	7,556	26,645
懷孕週期百分比	54.2	53.5	46.4	33.2	46.3
活產週期百分比	43.9	42.3	34.5	21.6	35.1
植入週期數	7,082	5,695	5,971	7,397	26,145
植入週期之懷孕率	55.2	54.3	47.4	34.0	47.2
植入週期之活產率	44.7	42.9	35.3	22.1	35.8
植入週期之單胎活產率	39.6	36.0	29.9	19.0	30.8
取消百分比	1.7	1.5	2.1	2.1	1.9
平均植入胚胎數	1.3	1.5	1.7	1.9	1.6
活產週期之多胞胎百分比	11.4	16.2	15.1	14.1	14.0

非捐贈卵子之新鮮胚胎	<35	35-37	38-40	>40	合計
治療週期數	6,429	5,572	7,457	11,309	30,767
懷孕週期百分比	4.4	5.3	4.9	2.2	3.9
活產週期百分比	3.2	3.6	3.4	1.1	2.6
植入週期數	716	810	1,106	1,669	4,301
植入週期之懷孕率	39.5	36.3	32.9	14.7	27.6
植入週期之活產率	29.1	24.8	23.2	7.2	18.3
植入週期之單胎活產率	26.7	20.5	19.6	6.7	15.9
取消百分比	89.9	86.3	86.2	86.4	87.1
平均植入胚胎數	1.1	1.6	1.8	1.9	1.7
活產週期之多胞胎百分比	8.2	17.4	15.6	7.5	12.8

非捐贈卵子之冷凍胚胎	<35	35-37	38-40	>40	合計
治療週期數	7,063	5,658	5,917	5,893	24,531
懷孕週期百分比	54.3	53.2	46.1	27.7	45.7
活產週期百分比	44.1	42.2	34.5	16.8	34.8
植入週期數	6,941	5,571	5,793	5,756	24,061
植入週期之懷孕率	55.3	54.1	47.1	28.4	46.6
植入週期之活產率	44.8	42.8	35.2	17.2	35.4
植入週期之單胎活產率	39.8	36.0	30.0	15.3	30.7
取消百分比	1.7	1.5	2.1	2.3	2.0
平均植入胚胎數	1.3	1.5	1.7	1.9	1.6
活產週期之多胞胎百分比	11.2	15.9	14.8	11.2	13.4

非捐贈精子之新鮮胚胎	<35	35-37	38-40	>40	合計
治療週期數	6,433	5,599	7,525	12,177	31,734
懷孕週期百分比	4.4	5.3	4.9	2.6	4.0
活產週期百分比	3.2	3.6	3.5	1.5	2.7
植入週期數	713	808	1,113	1,762	4,396
植入週期之懷孕率	39.7	36.5	33.4	18.2	28.9
植入週期之活產率	29.0	24.8	23.5	10.4	19.4
植入週期之單胎活產率	26.6	20.4	19.7	8.6	16.5
取消百分比	90.0	86.4	86.3	87.1	87.4
平均植入胚胎數	1.2	1.6	1.8	1.9	1.7
活產週期之多胞胎百分比	8.2	17.5	16.1	17.5	14.8

非捐贈精子之冷凍胚胎	<35	35-37	38-40	>40	合計
治療週期數	7,129	5,734	6,059	7,515	26,437
懷孕週期百分比	54.1	53.5	46.3	33.3	46.3
活產週期百分比	43.8	42.2	34.6	21.6	35.0
植入週期數	7,004	5,646	5,934	7,357	25,941
植入週期之懷孕率	55.1	54.3	47.3	34.0	47.2
植入週期之活產率	44.6	42.9	35.3	22.1	35.7
植入週期之單胎活產率	39.5	35.9	30.0	19.0	30.7
取消百分比	1.8	1.5	2.1	2.1	1.9
平均植入胚胎數	1.3	1.5	1.7	1.9	1.6
活產週期之多胞胎百分比	11.4	16.2	15.1	14.1	14.0

配偶間之新鮮胚胎	<35	35-37	38-40	>40	合計
治療週期數	6,365	5,542	7,422	11,260	30,589
懷孕週期百分比	4.4	5.2	4.9	2.2	3.8
活產週期百分比	3.2	3.6	3.4	1.1	2.5
植入週期數	707	803	1,097	1,660	4,267
植入週期之懷孕率	39.3	36.1	33.0	14.7	27.5
植入週期之活產率	28.7	24.5	23.2	7.2	18.2
植入週期之單胎活產率	26.3	20.3	19.6	6.7	15.8
取消百分比	89.9	86.3	86.2	86.3	87.1
平均植入胚胎數	1.1	1.6	1.8	1.9	1.7
活產週期之多胞胎百分比	8.4	17.3	15.7	7.5	12.9
配偶間之冷凍胚胎	<35	35-37	38-40	>40	合計
治療週期數	6,985	5,608	5,878	5,852	24,323
懷孕週期百分比	54.2	53.2	46.1	27.7	45.7
活產週期百分比	44.0	42.1	34.5	16.8	34.7
植入週期數	6,863	5,522	5,756	5,716	23,857
植入週期之懷孕率	55.2	54.1	47.1	28.4	46.6
植入週期之活產率	44.7	42.8	35.3	17.2	35.4
植入週期之單胎活產率	39.7	35.9	30.0	15.3	30.7
取消百分比	1.7	1.5	2.1	2.3	1.9
平均植入胚胎數	1.3	1.5	1.7	1.9	1.6
活產週期之多胞胎百分比	11.2	15.9	14.8	11.2	13.4

	所有年齡合計	
捐贈卵子	新鮮胚胎	冷凍胚胎
植入週期數	129	2,084
植入週期之活產率	58.9	39.3
平均植入胚胎數	1.8	1.6
捐贈精子	新鮮胚胎	冷凍胚胎
植入週期數	34	204
植入週期之活產率	32.4	41.2
平均植入胚胎數	1.9	1.6
配偶間	新鮮胚胎	冷凍胚胎
植入週期數	4,267	23,857
植入週期之活產率	18.2	35.4
平均植入胚胎數	1.7	1.6

植入胚胎數及活產單胞胎率**35 歲以下**

	植入胚胎數			
	1	2	3	4
植入週期數	6,076	1,485	171	72
植入週期懷孕率	52.2	60.3	55.0	48.6
胎心音單胞胎率	93.4	58.2	55.0	50.0
活產單胞胎率	98.2	61.1	56.4	53.6

35-37 歲

	植入胚胎數			
	1	2	3	4
植入週期數	3,284	3,048	115	63
植入週期懷孕率	50.5	53.6	54.8	61.9
胎心音單胞胎率	91.0	65.0	64.7	51.4
活產單胞胎率	98.4	69.6	71.7	63.3

38-40 歲

	植入胚胎數			
	1	2	3	4
植入週期數	2,520	4,286	175	111
植入週期懷孕率	45.8	44.6	46.3	49.6
胎心音單胞胎率	91.8	67.9	60.0	65.9
活產單胞胎率	98.9	76.4	69.6	73.0

40 歲以上

	植入胚胎數			
	1	2	3	4
植入週期數	2,733	5,343	559	532
植入週期懷孕率	34.9	30.2	23.1	25.4
胎心音單胞胎率	87.4	61.5	59.1	59.6
活產單胞胎率	99.6	76.7	73.3	80.5

通報資料之人工生殖機構數：101

附錄 3 112 年個別人工生殖機構統計資料

縣市	機構名稱	治療週期數	人工生殖方法(%)			不孕原因(%)							
			IVF 體外受精	ICSI (含 IVF+ICSI) 卵質內 精子注射	其他	多種 因素	卵巢 因素	輸卵管 因素	子宮內 膜異位 症	其他 子宮 因素	其他 女性 因素	男性 因素	不明 原因
基隆市	健安婦產科診所	286	74.8	25.2	0.0	19.6	48.3	11.5	4.6	0.4	1.4	7.7	6.6
	基隆生基婦產科診所	20	100.0	0.0	0.0	60.0	10.0	0.0	0.0	0.0	0.0	0.0	30.0
臺北市	國立臺灣大學醫學院附設醫院	1,176	65.5	34.5	0.0	57.8	11.1	5.3	1.0	0.3	14.2	5.5	4.8
	長庚醫療財團法人台北長庚紀念醫院	643	56.6	43.4	0.0	47.1	49.9	0.6	0.0	0.5	0.8	0.8	0.3
	臺北榮民總醫院	530	78.3	21.7	0.0	16.6	25.5	6.4	2.3	0.8	0.4	39.1	9.1
	國防醫學院三軍總醫院	132	62.1	37.9	0.0	49.2	25.8	6.8	0.0	3.0	6.1	6.1	3.0
	台灣基督長老教會馬偕醫療財團法人馬偕紀念醫院	697	61.6	38.5	0.0	44.3	13.9	6.2	3.2	1.3	0.3	25.4	5.5
	國泰醫療財團法人國泰綜合醫院	368	93.2	6.8	0.0	23.1	53.5	12.0	1.9	2.7	1.6	5.2	0.0
	中山醫療社團法人中山醫院	234	77.8	22.2	0.0	9.8	63.3	9.8	0.4	2.1	0.9	11.1	2.6
	新光醫療財團法人新光吳火獅紀念醫院	895	48.9	51.1	0.0	1.3	61.9	15.1	0.9	0.3	0.0	13.0	7.5
	基督復臨安息日會醫療財團法人臺安醫院	163	76.7	23.3	0.0	58.3	20.9	0.0	0.0	1.8	0.0	16.0	3.1
	臺北醫學大學附設醫院	764	81.2	18.9	0.0	4.1	66.8	5.9	3.9	3.4	4.2	9.7	2.1
	生泉婦產科診所	76	84.2	15.8	0.0	21.1	47.4	9.2	2.6	10.5	0.0	9.2	0.0
	宏孕診所	219	23.7	76.3	0.0	35.2	47.0	2.3	1.4	1.4	2.7	6.9	3.2
	祈新婦產科診所	371	75.2	24.8	0.0	24.5	67.1	0.0	0.3	1.9	1.4	3.2	1.6
	愛群婦產科診所	1,671	76.4	23.3	0.2	29.4	42.9	6.0	1.7	3.5	9.0	7.0	0.4
	黃建榮婦產科診所	1,392	52.4	47.4	0.2	47.6	27.8	6.0	1.1	3.2	0.0	6.3	8.1

附錄 3 112 年個別人工生殖機構統計資料

縣市	機構名稱	治療週期數	人工生殖方法(%)			不孕原因(%)							
			IVF 體外受精	ICSI (含 IVF+ICSI) 卵質內 精子注射	其他	多種 因素	卵巢 因素	輸卵管 因素	子宮內 膜異位 症	其他 子宮 因素	其他 女性 因素	男性 因素	不明 原因
臺北市	王家瑋婦產科診所	2,618	55.6	44.4	0.0	53.8	9.0	3.1	1.1	24.3	0.1	8.6	0.0
	生基婦產科診所	359	83.0	17.0	0.0	48.2	25.6	3.1	0.6	0.6	3.3	5.6	13.1
	臺北市立聯合醫院仁愛院區	187	80.8	19.3	0.0	26.2	48.1	7.0	2.7	0.0	5.9	7.5	2.7
	華育婦產科診所	861	86.0	14.1	0.0	2.2	28.7	6.9	12.1	7.4	0.7	11.4	30.7
	送子鳥 11 診所	1,949	65.4	34.6	0.0	74.3	14.6	2.2	0.0	3.1	0.8	2.5	2.6
	佑昇診所	1,589	71.0	29.0	0.0	1.9	49.8	8.2	4.0	1.5	6.5	10.1	18.0
	臺北婦產科診所	3,602	74.4	25.6	0.0	32.4	13.6	7.2	5.5	2.7	30.8	5.2	2.8
	孕醫診所	522	86.6	13.4	0.0	67.8	12.8	1.9	1.2	0.2	11.7	3.5	1.0
	楊鵬生婦產科診所	139	53.2	46.8	0.0	0.0	98.6	0.0	0.7	0.0	0.0	0.7	0.0
	禾馨宜蘊婦產科診所	1,749	80.5	19.5	0.0	14.5	72.3	2.6	1.3	1.7	2.8	3.1	1.8
	家瑋生育診所	231	51.5	48.5	0.0	57.1	6.1	3.0	0.9	15.2	0.0	17.8	0.0
新北市	醫療財團法人徐元智先 生醫藥基金會紀念 醫院	252	42.9	57.1	0.0	48.4	38.9	3.6	0.8	0.4	0.0	6.8	1.2
	蔡佳璋婦產科診所	182	69.8	30.2	0.0	32.4	48.4	1.7	1.7	0.0	0.0	6.0	9.9
	衛生福利部雙和醫院	108	75.0	25.0	0.0	7.4	45.4	21.3	11.1	0.9	0.0	12.0	1.9
	佛教慈濟醫療財團法人 台北慈濟醫院	122	54.1	45.9	0.0	34.4	26.2	9.8	0.0	0.0	2.5	13.1	13.9
	星孕國際診所	147	72.8	27.2	0.0	40.8	46.9	1.4	0.0	0.7	3.4	6.8	0.0
	基生婦產科診所	441	68.9	31.1	0.0	46.9	37.4	2.0	1.4	2.3	0.5	3.0	6.6
桃園市	長庚醫療財團法人林口 長庚紀念醫院	1,485	60.5	39.5	0.0	59.5	34.8	3.0	0.3	0.5	0.2	1.6	0.1
	衛生福利部桃園醫院	63	90.5	9.5	0.0	50.8	30.2	6.4	0.0	4.8	1.6	6.4	0.0
	敏盛綜合醫院	65	63.1	36.9	0.0	20.0	27.7	21.5	1.5	3.1	0.0	12.3	13.9
	宏其醫療社團法人宏其 婦幼醫院	960	53.8	46.3	0.0	19.0	29.4	29.7	1.8	4.5	3.2	6.6	5.9

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縣市	機構名稱	治療週期數	人工生殖方法(%)			不孕原因(%)							
			IVF 體外受精	ICSI (含 IVF+ICSI) 卵質內 精子注射	其他	多種 因素	卵巢 因素	輸卵管 因素	子宮內 膜異位 症	其他 子宮 因素	其他 女性 因素	男性 因素	不明 原因
桃園市	惠生婦產科診所	175	64.0	36.0	0.0	33.7	13.1	8.0	0.6	13.1	0.0	29.7	1.7
	婦茂婦幼診所	434	70.5	29.5	0.0	12.4	17.1	10.8	5.3	3.0	5.8	7.8	37.8
	禾馨宜蘊婦產科診所	774	70.4	29.6	0.0	25.7	39.0	6.6	7.9	4.9	3.1	6.3	6.5
	桃園宏其生基診所	342	65.2	34.8	0.0	14.6	42.4	16.1	1.8	5.3	1.5	8.8	9.7
	桃園秉坤婦幼醫院	110	90.0	10.0	0.0	12.7	43.6	15.5	0.0	0.0	0.0	11.8	16.4
新竹市	江婦產科診所	43	60.5	39.5	0.0	4.7	34.9	7.0	7.0	2.3	0.0	44.2	0.0
	送子鳥診所	2,282	63.2	36.8	0.0	31.1	48.9	1.6	0.5	0.8	0.0	7.1	10.0
	林正凱好孕診所	226	80.1	19.9	0.0	95.6	4.0	0.0	0.4	0.0	0.0	0.0	0.0
	新竹市立馬偕兒童醫院 (委託台灣基督長老教會馬偕醫療財團法人興建經營)	532	54.9	45.1	0.0	60.2	14.3	3.6	2.6	5.6	0.4	12.0	1.3
新竹縣	東元醫療社團法人艾微笑診所	1,200	62.6	37.4	0.0	83.2	4.5	0.2	0.4	5.1	2.0	4.2	0.5
	中國醫藥大學新竹附設醫院	122	70.5	29.5	0.0	56.6	13.9	8.2	0.0	0.0	0.0	17.2	4.1
	國立臺灣大學醫學院附設醫院新竹臺大分院	83	57.8	42.2	0.0	7.2	22.9	20.5	4.8	1.2	0.0	18.1	25.3
苗栗縣	大千綜合醫院	63	82.5	17.5	0.0	4.8	47.6	23.8	11.1	3.2	0.0	6.4	3.2
臺中市	中國醫藥大學附設醫院	335	60.3	39.7	0.0	46.3	27.2	4.5	2.7	0.6	2.1	8.1	8.7
	中山醫學大學附設醫院	351	77.5	22.5	0.0	98.0	0.3	0.9	0.0	0.3	0.0	0.3	0.3
	茂盛醫院	5,220	69.2	30.8	0.0	55.2	28.0	2.0	0.1	1.4	5.8	5.2	2.4
	臺中榮民總醫院	752	85.0	15.0	0.0	20.4	28.7	16.9	8.4	8.1	3.2	8.4	6.0
	澄清綜合醫院中港分院	8	100.0	0.0	0.0	0.0	50.0	12.5	0.0	12.5	0.0	25.0	0.0
	林新醫療社團法人林新醫院	163	58.3	41.7	0.0	46.0	9.8	22.1	6.1	2.5	0.0	10.4	3.1
	劉忠俊婦產科診所	333	61.3	38.4	0.3	30.0	14.1	3.9	7.8	14.7	0.9	5.4	23.1

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臺中市	美村婦產科診所	67	50.8	49.3	0.0	31.3	31.3	10.5	0.0	16.4	0.0	9.0	1.5
	謝耀元婦產科診所	10	10.0	90.0	0.0	0.0	70.0	0.0	0.0	0.0	0.0	30.0	0.0
	大新婦產科診所	860	79.3	20.2	0.5	16.4	71.3	5.2	2.6	0.9	0.5	3.1	0.0
	佛教慈濟醫療財團法人慈濟醫院	59	71.2	28.8	0.0	22.0	18.6	17.0	17.0	8.5	0.0	11.9	5.1
	張帆婦產科診所	528	65.3	34.7	0.0	74.2	10.2	1.9	1.1	7.0	0.6	4.2	0.8
	樂芙婦產科診所	423	86.3	13.7	0.0	25.1	67.9	2.1	0.2	0.0	0.5	4.3	0.0
	禾馨宜蘊婦產科診所	836	51.9	48.1	0.0	4.4	65.8	8.1	1.9	7.9	0.4	4.8	6.7
	童綜合醫療社團法人童綜合醫院	62	66.1	33.9	0.0	90.3	1.6	3.2	0.0	1.6	0.0	3.2	0.0
彰化縣	彰化基督教醫療財團法人彰化基督教醫院	1,417	63.4	36.6	0.0	28.6	40.2	5.4	3.7	1.1	9.8	7.6	3.6
	博元婦產科診所	450	67.1	32.9	0.0	34.7	34.9	10.4	3.3	7.3	1.1	6.9	1.3
	秀傳醫療財團法人彰濱秀傳紀念醫院	110	89.1	10.9	0.0	3.6	60.9	10.0	2.7	3.6	0.0	16.4	2.7
	迎杏福婦產科診所	266	50.4	49.6	0.0	5.3	69.2	7.1	8.3	0.8	0.0	9.0	0.4
雲林縣	國立臺灣大學附設醫院雲林分院	131	63.4	36.6	0.0	82.4	0.0	5.3	0.8	0.0	1.5	6.9	3.1
嘉義市	戴德森醫療財團法人嘉義基督教醫院	61	63.9	36.1	0.0	16.4	29.5	6.6	1.6	8.2	0.0	27.9	9.8
	嘉安婦幼診所	385	61.6	38.4	0.0	2.9	55.8	11.7	0.8	2.1	1.8	17.4	7.5
嘉義縣	長庚醫療財團法人嘉義長庚紀念醫院	306	88.6	11.4	0.0	10.8	10.8	13.4	1.3	5.9	0.7	2.3	54.9
臺南市	國立成功大學醫學院附設醫院	719	87.6	12.4	0.0	71.9	6.7	1.3	4.7	1.1	5.3	6.5	2.5
	郭綜合醫院	128	58.6	41.4	0.0	46.1	35.2	7.8	0.0	1.6	1.6	7.8	0.0

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縣市	機構名稱	治療週期數	人工生殖方法(%)			不孕原因(%)							
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臺南市	許朝欽婦產科診所	99	71.7	28.3	0.0	21.2	40.4	5.1	8.1	1.0	5.1	17.2	2.0
	台灣基督長老教會新樓醫療財團法人台南新樓醫院	190	94.7	5.3	0.0	76.8	7.4	10.0	0.5	1.6	0.0	3.7	0.0
	安安婦幼診所	1,061	91.3	8.6	0.1	5.1	48.0	10.5	0.4	10.2	1.9	19.6	4.4
	大安婦幼醫院	239	82.0	18.0	0.0	42.3	31.4	4.6	5.9	2.1	1.7	4.2	8.0
	安安試管永華婦幼診所	368	88.0	12.0	0.0	10.9	48.4	11.1	0.3	5.2	0.0	17.7	6.5
	奇美醫療財團法人奇美醫院	676	95.6	4.4	0.0	60.7	8.6	1.8	1.6	0.0	1.3	26.0	0.0
	璟馨婦幼醫院	1,180	89.0	10.9	0.2	5.3	72.3	9.7	0.1	1.7	0.0	9.2	1.8
高雄市	財團法人私立高雄醫學大學附設中和紀念醫院	355	62.8	37.2	0.0	27.9	46.2	8.2	4.5	5.1	2.5	3.9	1.7
	健新醫院	838	53.5	46.5	0.0	22.4	52.2	4.7	6.3	1.4	0.4	11.7	1.0
	阮綜合醫療社團法人阮綜合醫院	227	86.8	13.2	0.0	7.5	70.0	7.5	4.4	0.4	0.9	3.1	6.2
	高雄榮民總醫院	1,198	59.8	40.2	0.0	58.7	8.0	1.5	5.4	0.0	10.9	2.5	13.0
	張榮州婦產科診所	62	25.8	74.2	0.0	0.0	77.4	0.0	3.2	8.1	0.0	11.3	0.0
	好韻診所	396	90.4	9.1	0.5	31.3	58.1	3.8	0.5	2.5	0.3	3.5	0.0
	生生不息婦產科診所	751	61.5	38.5	0.0	8.7	51.4	9.2	1.2	6.1	1.2	17.6	4.7
	義大醫療財團法人義大大昌醫院	129	72.9	27.1	0.0	0.0	84.5	1.6	7.0	0.0	0.0	7.0	0.0
	安安十全婦幼診所	646	91.2	8.8	0.0	9.1	46.0	7.0	6.0	9.9	0.6	6.5	14.9
	安田婦產科診所	148	62.8	37.2	0.0	95.3	4.1	0.0	0.0	0.0	0.0	0.7	0.0
	長庚醫療財團法人高雄長庚紀念醫院	808	92.7	7.3	0.0	20.3	43.9	5.2	5.2	1.9	1.7	7.9	13.9
	義大醫療財團法人義大醫院	215	61.9	38.1	0.0	97.2	1.4	0.5	0.0	0.5	0.0	0.5	0.0

縣市	機構名稱	治療週期數	人工生殖方法(%)			不孕原因(%)							
			IVF 體外受精	ICSI (含 IVF+ICSI) 卵質內 精子注射	其他	多種 因素	卵巢 因素	輸卵管 因素	子宮內 膜異位 症	其他 子宮 因素	其他 女性 因素	男性 因素	不明 原因
高雄市	旭陽診所	920	72.8	27.2	0.0	37.6	40.7	2.9	2.8	2.1	0.2	5.5	8.2
	鈞安婦幼聯合醫院	28	71.4	28.6	0.0	57.1	25.0	0.0	0.0	7.1	0.0	0.0	10.7
屏東縣	屏基醫療財團法人屏東基督教醫院	194	87.6	12.4	0.0	24.7	37.1	17.0	2.6	4.1	0.0	4.6	9.8
花蓮縣	佛教慈濟醫療財團法蓮慈濟醫院	57	80.7	19.3	0.0	14.0	3.5	8.8	0.0	0.0	12.3	56.1	5.3
金門縣	衛生福利部金門醫院	89	98.9	1.1	0.0	0.0	65.2	1.1	0.0	32.6	0.0	1.1	0.0
	魏博士金門醫學診所	49	26.5	73.5	0.0	0.0	49.0	14.3	6.1	14.3	0.0	12.2	4.1

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3. 中華民國生育醫學會 Fertility Society, ROC : <http://www.fs.org.tw>
4. American Society for Reproductive Medicine : <http://www.asrm.org/>
5. Centers for Disease Control and Prevention : <http://www.cdc.gov/>

CHAPTER 1 Overview

The Assisted Reproduction Act (ARA) was promulgated and implemented on March 21, 2007 with the aim of facilitating the development of assisted reproduction technology (hereinafter referred to as “ART”) and to safeguard the rights of infertile couples, children born under assisted reproduction, and donors, as well as to uphold public ethics and health. According to the provisions of Article 27 of the ARA, assisted reproduction institutes are obliged to report relevant information regarding the number of patients undergoing treatment, success rates, causes of infertility, and the types of ART adopted. The responsible authority shall establish an assisted reproduction database and periodically conduct statistical analyses, as well as publish updated data accordingly.

Relevant laws and regulations governing the management of the practices and database of assisted reproduction in Taiwan has been gradually formulated since 1995. By early 1998, a total of 48 assisted reproduction institutes had been established in Taiwan; by July, 2025, the number of licensed medical institutes had reached 103 in total. In accordance with the provisions of the ARA, these medical institutes are required to apply for approval from the responsible authority to engage in ART practices, and verify methods of acceptance, storage, and provision of donated gametes. To maintain the quality of ART performed in medical institutes, the Health Promotion Administration, Ministry of Health and Welfare (hereinafter referred to the “HPA”) regularly carries out permit reviews on all licensed assisted reproduction institutes.

This report focuses on the statistical analysis of cases that had been treated in 101 assisted reproduction institutes in Taiwan (2023). In response to the government’s implementation of the “In Vitro Fertilization (commonly known as test tube baby) ART Subsidy Program” from July 1, 2021, the qualification for subsidy recipients was expanded. Chapter 1 introduces the method of Assisted reproductive technology (ART) and the meaning of the treatment cycle, and

Chapter 2 covers all treatment cycles as a statistical basis, and maintains an analysis framework over the years, including data on ART between spouses, and data on recipients of sperm and egg donors. The third chapter has been adjusted to include the analysis of ART in ROC nationals. Chapter 4 presents an analysis of the trends in ART practices from 1998-2023.



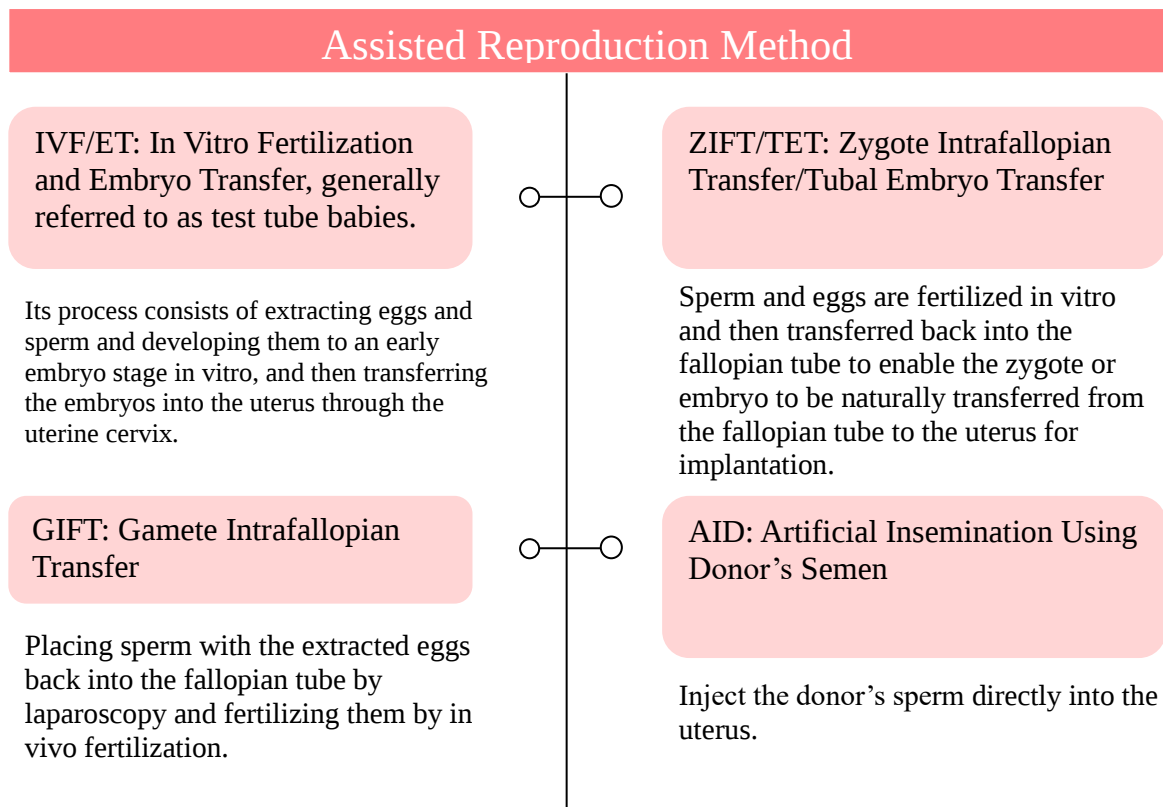
1.1 Assisted Reproduction Treatment Cycles

As the process of assisted reproduction comprises a series of steps which need a period of around two weeks or more to complete, using “cycle” as the unit will be more appropriate than a single time point in analyzing the data. In the course of statistical analysis conducted under such calculation, a particular couple receiving assisted reproductive treatment may contribute more than one cycle.

The calculation of a cycle begins when ovarian stimulation is initiated, or when an examination for embryo transfer is conducted. Its goal is to enable a smooth birth of healthy infants. Even though not all treatment cycles are successful and proceed until birth, they will still be included in the statistics of treatment cycles.

1.2 Assisted Reproductive Technology

This section delves into several assisted reproductive methods and micromanipulation techniques used in ART.



Micromanipulation Technique

ICSI: Intracytoplasmic Sperm Injection.

Fertilizing the egg by injecting a single sperm into the egg cytoplasm.

Assisted Hatching

Thinning or punching a hole on the zona pellucida to assist in the embryo hatching and implantation.

Embryo Biopsy

Retrieval of several cells from the embryo to perform genetic diagnosis, chromosome screening or other tests for embryo transfer reference.

The stipulation of Article 5 of the ARA does not apply to cases of Artificial Insemination Using Husband's Semen (AIH), except for the provisions prohibiting the embryo's gender selection and relevant penalties listed in Paragraph 3, Article 16 of the ARA. As the practice of AIH treatment is not limited to assisted reproduction institutes, these case data are not required to be reported. Hence, the term "assisted reproduction case" stated in this paper and all analytical data, does not include assisted reproduction cases using the AIH procedure.

CHAPTER 2 Overall ART Cycle Statistics

Calculations for the data periods listed in this report begin from the starting point of each cycle. All data compiled for analyses came from the data regularly reported by the 101 assisted reproduction institutions in 2023.

2.1 The number of Treatment Cycles

In 2023, there were a total of 58,557 assisted reproduction treatment (ART) cycles (including cycles in which egg retrieval or embryo transfers were not completed). Among these, 54,912 cycles (93.8%) were ART using nondonor gametes, and 3,645 cycles (6.2%) were ART using donated gametes (Table 1).

Table 1 ART Cycles in 2023

Type of Cycle	Number of ART Cycles	Unit: Cycle/%
		Percentage
Use of Donated Sperm and Eggs	3,645	6.2
Use of Donor Sperm	386	0.7
Use of Donor Eggs	3,259	5.6
Use of Nondonor Sperm, Eggs, or Embryos	54,912	93.8
Total ART cycles	58,557	100



2.2 Age of Individuals Receiving ART

Among all couples receiving ART (the men and women receiving ART are hereafter referred to as “recipient men” and “recipient women,” respectively), the most common age groups for recipient women and recipient men were 35–39 years (35%) and 40–44 years (31.4%), respectively (Table 2). If the age groups are further divided into individual ages, recipient women aged 39 years (7.94%) accounted for the highest proportion, followed by those aged 40 years (7.86%). For women receiving donated eggs, the age distribution is shown in Table 3, with those aged 45–49 years comprising the largest proportion (40.6%).

Table 2 Age-Specific Recipient Couples in ART in 2023

Table 2: Age-Specific Recipient Couples in ART in 2025				
				Unit: Cycle/%
Recipient Women			Recipient Men	
Age	The Number of Treatment Cycles	Percentage	The Number of Treatment Cycles	Percentage
<25	167	0.3	40	0.1
25-29	2,092	3.6	1,279	2.2
30-34	11,445	19.5	9,033	15.4
35-39	20,468	35.0	18,276	31.2
40-44	19,639	33.5	18,414	31.4
45-49	4,296	7.3	8,254	14.1
≥50	450	0.8	3,261	5.6
Total ART cycles	58,557	100	58,557	100

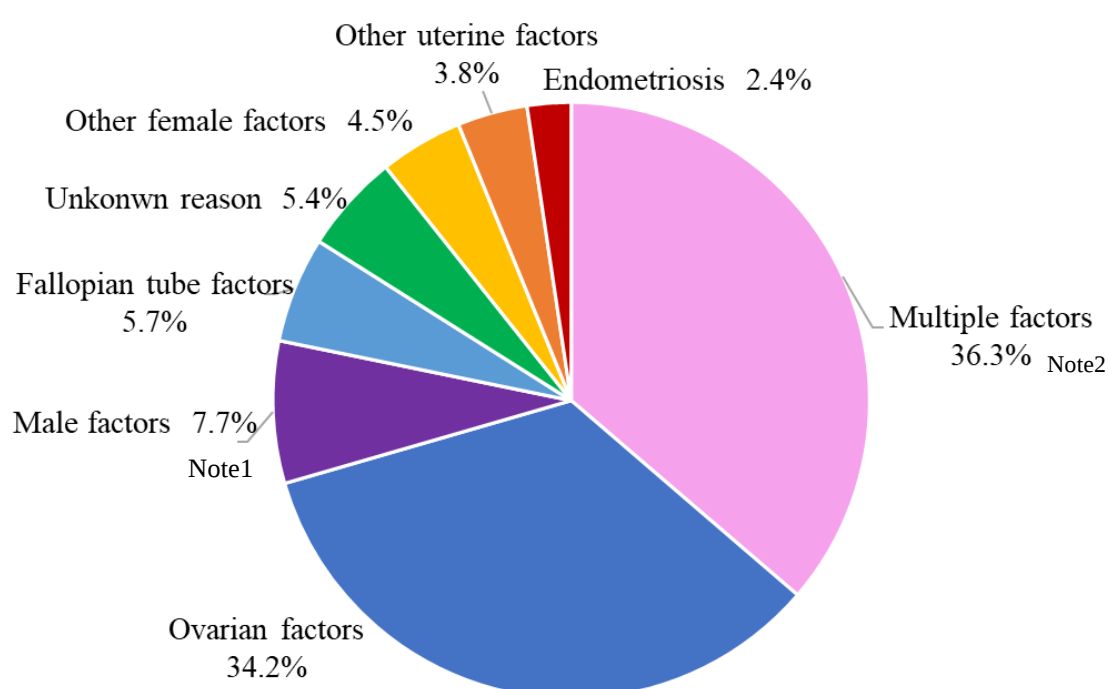
Table 3 Age-Specific Recipient Women Using Donated Eggs in ART in 2023

		Unit: Cycle/%
Age of Recipient Women	Number of treatment cycles	Percentage
<25	2	0.1
25-29	17	0.5
30-34	193	5.9
35-39	354	10.9
40-44	1,025	31.5
45-49	1,323	40.6
≥50	345	10.6
Total number of treatment cycles Using Donated Eggs	3,259	100

2.3 Causes of Infertility

Causes of infertility among ART cases may be congenital, acquired, or related to external environmental factors. As shown in Figure 1, combined factors (36.3%) accounted for the largest proportion, followed by ovarian factors (34.2%) and male factors (7.7%). Causes of male infertility included gonadotropin deficiency, testicular dysfunction, vas deferens obstruction, and sexual dysfunction .

Figure 1 Causes of Infertility in ART in 2023
(Denominator: 58,557 treatment cycles)



Note: 1. Source: Table 7 "Data Sheet of Assisted Reproduction Cases" of the Regulations for the Notification and Management of Assisted Reproduction Data, it is not possible to break down the percentage of male infertility causes.

Note: 2. Multiple factors refer to two or more infertility factors.

2.4 ART Methods Used

Among the types of ART used, the most popular procedure was the IVF method, accounting for 99.96% of the total. Other methods such as GIFT, ZIFT/TET, and AID accounted for less than 0.03% of the total. Since IVF is the most commonly used ART procedure, treatment conditions and pregnancy outcomes of IVF treatment cases in ROC nationals using nondonor eggs, sperm, or embryos will be presented in Section 2 of Chapter 3.

2.5 Micromanipulation Technique

Among the 58,557 ART cycles in 2023, 80.4% involved micromanipulation techniques (Table 4). They primarily included assisted hatching (35.2%), followed by intracytoplasmic sperm injection (30.1%), with another 11.4% involving a combination of multiple techniques.

Table 4 Status of Micromanipulation Technique Application in ART Case Cycles in 2023
Unit: Cycle/%

Cases Using Micromanipulation	The number of treatment cycles	Percent
Procedure applied	47,053	80.4
Intracytoplasmic sperm injection (ICSI)	17,623	30.1
Assisted Hatching	20,615	35.2
Embryo biopsy for chromosomal screening or genetic diagnosis	2,141	3.7
Preimplantation genetic testing for aneuploidy (PGT-A)	2,091	3.6
Preimplantation genetic testing for monogenic/ single-gene disorders (PGT-M)	50	0.1
Other (including combined multiple techniques)	6,674	11.4
Procedure not applied	11,504	19.6
Total ART cycles	58,557	100

2.6 The Number of Transfer Cycles and Embryos Transferred

Among the 58,557 ART cycles, 30,575 were embryo transfer cycles. The majority (92.0%) involved embryos formed from nondonor gametes, among which frozen embryos formed from nondonor gametes (78.0%) accounted for the largest proportion (Table 5).



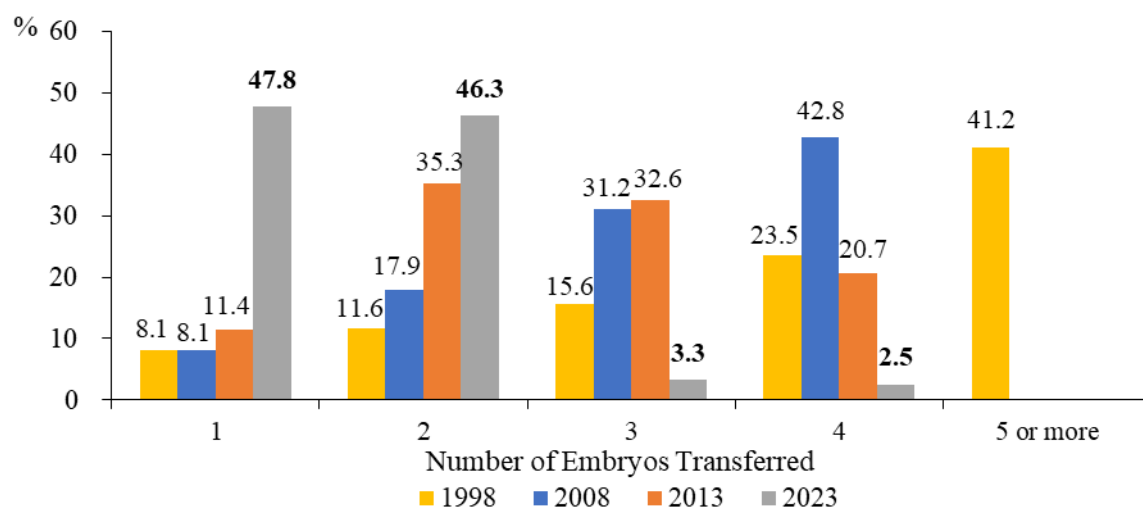
Table 5 Percentage of Transfer Type in ART in 2023
Unit: Cycle/%

Transfer Type	Number of Transfer Cycles	Percentage
Using nondonor embryo	28,124	92.0
Fresh embryo	4,267	14.0
Frozen embryo	23,857	78.0
Using embryo formed from donated sperm or eggs	2,451	8.0
Fresh embryo	163	0.5
Frozen embryo	2,288	7.5
Total Number of Transfer Cycles	30,575	100

To ensure that assisted reproduction institutions follow guidelines on the number of embryos transferred and avoid transferring excessive embryos—which increases the likelihood of multiple pregnancies, elevates mother-infant health risks, and imposes financial burdens on families—the Assisted Reproduction Act promulgated in 2007 stipulates that no more than four embryos may be transferred per procedure. In other words, the number of embryos transferred each time is limited to no more than four, with penalties in place for violations. Furthermore, because multiple pregnancies carry higher pregnancy and obstetric risks than singleton pregnancy, the 2014 amendments to the Regulations for Assisted Reproduction Institution Permit included “the rate of transferring no more than two embryos for women under the age of 35 years” as one of the monitoring indicators. Beginning July 1, 2021, under the government’s expanded in vitro fertilization (IVF) subsidy program, additional rules were imposed: women under the age of 36 years must be transferred only one embryo, while those aged 36–44 years must be transferred only one or two embryos in order to qualify for subsidies. In 2023, 94.1% of ART cycles involved the transfer of no more than two embryos (93.4% and 84.7% in 2022 and 2021, respectively) (Figure 2).

Among the 58,557 treatment cycles, 2.50% resulted in ovarian hyperstimulation syndrome, a decrease from 2.79% in 2022. In 2023, the proportions of mild, moderate, and severe ovarian hyperstimulation syndrome reported by assisted reproduction institutions, relative to the number of treatment cycles, were 2.36%, 0.11%, and 0.03%, respectively (Table 6).

Figure 2 Percentage of Number of Embryos Transferred in ART Cycles



*The government promulgated and implemented the ARA in 2007, which specifically limits the maximum number of embryos transferred to be four in each ART.

Table 6 Degree of Ovarian Hyperstimulation Syndrome(OHSS) in ART Case Cycles in 2023
Unit: Cycle/%

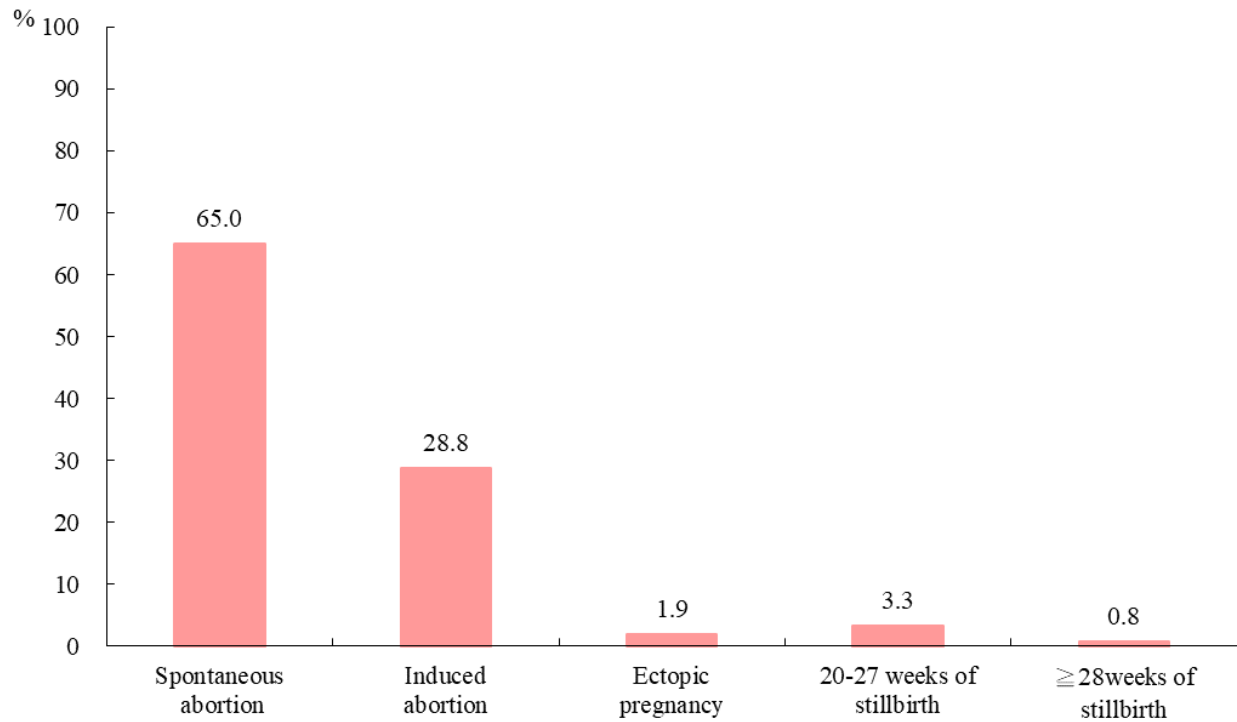
Ovarian Hyperstimulation Syndrome	Number of treatment cycles	Percentage
No	57,094	97.50
Yes	1,463	2.50
mild	1,382	2.36
moderate	64	0.11
severe	17	0.03
Total ART cycles	58,557	100

2.7 Pregnancy and Live Births

Among the 58,557 ART cycles, 30,575 involved embryo transfers, 13,623 resulted in pregnancy, 65 involved fetal reduction, and 10,209 resulted in live births, with a total of 11,658 infants born. Of the live birth cycles, 14.1% were multiple births. Compared with 2021 and 2022, the number of infants born increased by 1,884 and 109, respectively.

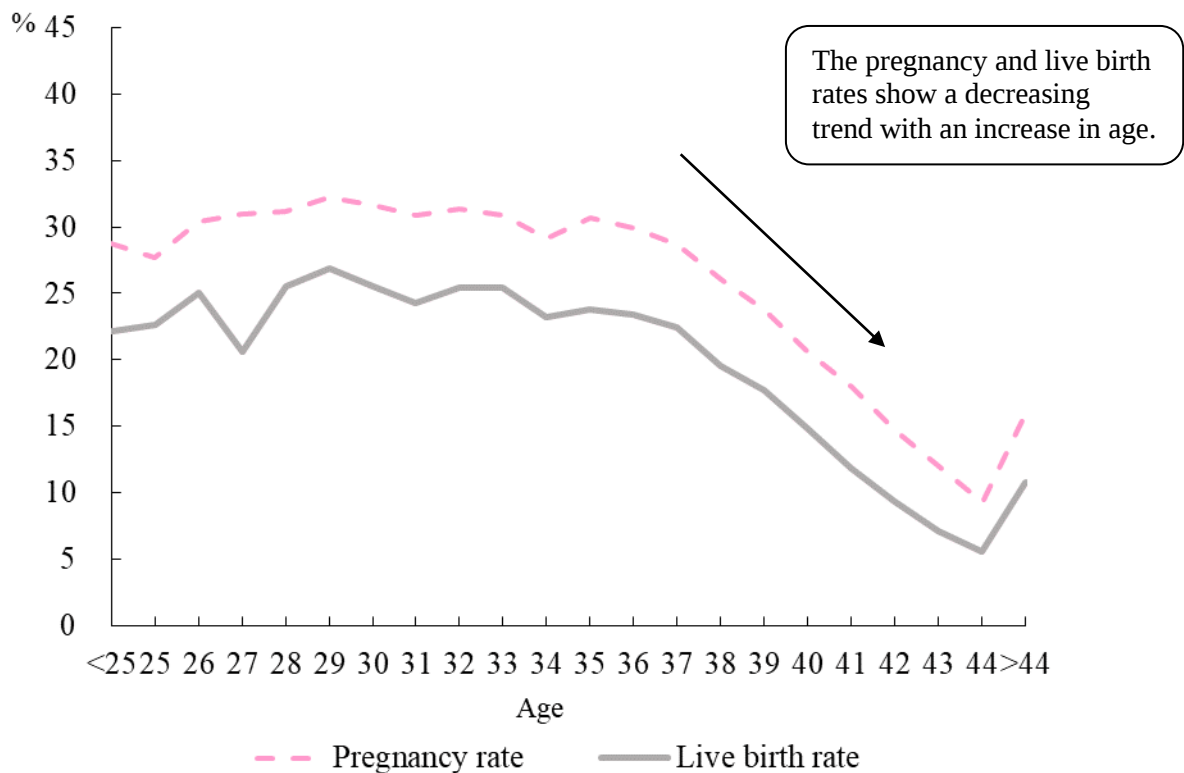
Among the 3,414 pregnancy cycles without live birth records, 2,222 (65.0%) involved spontaneous abortions, 984 (28.8%) involved abortions (including cases with no fetal heartbeats before 20 weeks of gestation), 66 involved ectopic pregnancy (1.9%), 140 (4.1%) involved stillbirths occurring between 20–27 weeks or ≥ 28 weeks of gestation, and 71 involved unknown outcomes (a few cycles simultaneously had 2 or more conditions of spontaneous abortion, induced abortion, ectopic pregnancy, and either condition of stillbirth between 20 and 27 weeks or after 28 weeks) (Figure 3).

Figure 3 Analyses on Pregnancy with No Live Birth Cycles of ART in 2023
(Denominator: 3,414 pregnancy cycles without live birth cycles, Unit: %)



In 2023, the pregnancy and live birth rates per ART were 23.3% and 17.4%, respectively. When calculating these rates, if all embryos were initially frozen and later thawed for transfer, the “embryo freezing” and “embryo thawing and transfer” procedures were each counted as separate treatment cycles. This may have resulted in an underestimation of the reported pregnancy and live birth rates. The relationships between recipient women’s ages and pregnancy/live birth rates are shown in Figure 4. Because the number of cycles was very small for women younger than 25 and for those older than 44, these age groups were combined for analyses. Among recipient women, both pregnancy and live birth rates declined with increasing age after 35.

Figure 4 Correlation Between Women’s Age and Pregnancy/Live Birth Rates of ART in 2023
(Denominator: 58,557 treatment cycles)



This section further analyzes the success rates, pregnancy outcomes and related issues of assisted reproduction, and explains them item by item.

Analysis on seven types of success rates:

Due to the advancement of ART in recent years, more and more cases were carried out by freezing all embryos, which has increased the number of treatment cycles. However, not all cycles led to the transfer of embryos; therefore, only the cumulative pregnancy rates and the cumulative live birth rates during the treatment cycle can truly reflect the quality of ART.

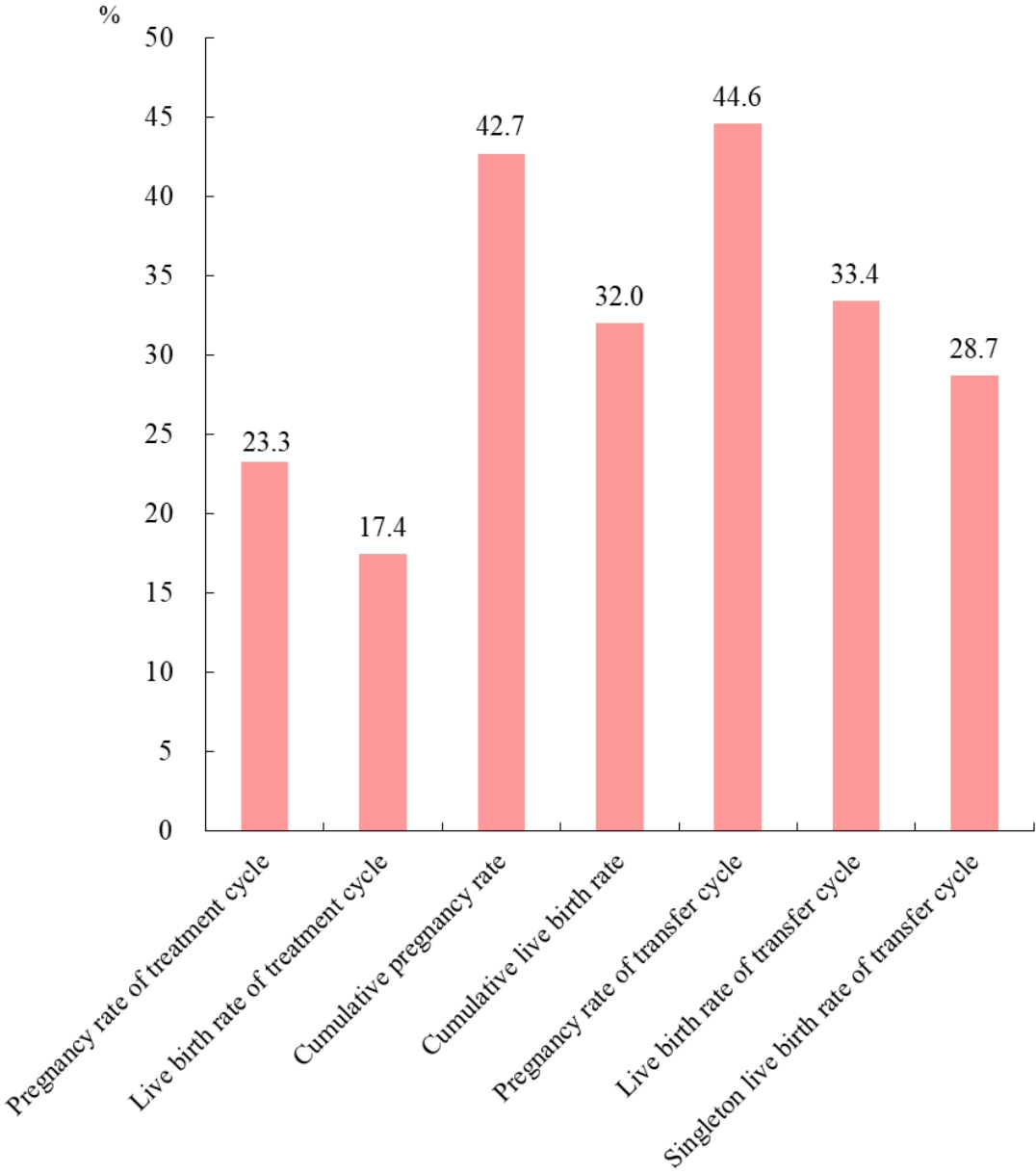
Figure 5 shows the results using the seven different calculation methods of measuring the success rate of ART, including: pregnancy rate of treatment cycles, live birth rate of treatment cycles, cumulative pregnancy rate, cumulative live birth rate, pregnancy rate of transfer cycle, live birth rate of transfer cycle and the singleton live birth rate of the transfer cycle, which are described as follows:

1. Pregnancy rate of treatment cycle: this rate is generally referred to as the “pregnancy rate.” It refers to the percentage of pregnancies during the ART cycle. Since some pregnancies resulted in spontaneous abortion, stillbirth, etc., this rate will be higher than the live birth rate for a treatment cycle. The pregnancy rate of treatment cycles was 23.3% in 2023.
2. Live birth rate of treatment cycle: this rate is generally referred to as the “live birth rate”, which refers to the percentage of live births during the ART cycle (regardless of whether there are singleton or multiple births, both are considered as only one live birth). This is the ratio that most people care about because it presents the opportunity to get a live birth infant by assisted reproduction. The live birth rate of treatment cycles was 17.4% in 2023.
3. Cumulative pregnancy rate: It reflects the percentage of pregnancy rate in each egg retrieval cycle; it is calculated as: [the number of fresh embryo pregnancy cycles + the number of frozen embryo pregnancy cycles + number of (fresh embryo + frozen embryo) pregnancy cycles] ÷ [number of fresh embryo treatment cycles + number of (fresh embryo + frozen embryo) treatment cycles]. The cumulative pregnancy rate was 42.7% in 2023.

4. Cumulative live birth rate: It reflects the percentage of live births in each egg retrieval cycle (regardless of whether there are singleton or multiple births, both are considered as only one live birth); it is calculated as [the number of fresh embryo live birth cycles + the number of frozen embryo live birth cycles + number of (fresh embryo + frozen embryo) live birth cycles] ÷ [number of fresh embryo treatment cycles + number of (fresh embryo + frozen embryo) treatment cycles]. The cumulative live birth rate was 32.0% in 2023, and the cumulative live birth rate in women below 38 years of age was 49.7%.
5. Pregnancy rate of transfer cycle: the percentage of pregnancies during the ART transfer cycles. The pregnancy rate of transfer cycles was 44.6% in 2023. Among them, the pregnancy rate of fresh embryo transfer was 29.0%, and the pregnancy rate of frozen embryo transfer was 47.2%.
6. Live birth rate of transfer cycle: the percentage of live births during the ART transfer cycles. The live birth rate of transfer cycles was 33.4% in 2023, in which the live birth rate of fresh embryo transfer was 19.5%, and the live birth rate of frozen embryo transfer was 35.8%.
7. Singleton live birth rate of transfer cycle: the percentage of singleton live births during the ART transfer cycles. Singleton live birth is an important measure of the success of assisted reproduction techniques, since a delivery of multiple infants has higher neonatal health risks, including preterm birth, low birth weight, birth defects and infant mortality, as compared to single births. The singleton live birth rate of transfer cycle was 28.7% in 2023.



Figure 5 Analysis of ART Success Rate in 2023



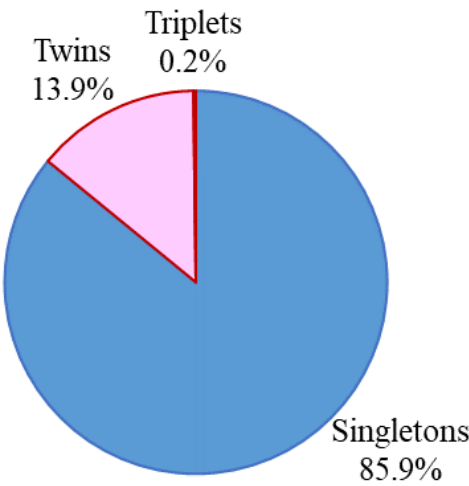
2.8 Status of New-Born Infants

2.8.1 Number of Live Births

Among the 10,209 live birth cycles, 85.9% were singleton births, 13.9% were twin births, and 0.2% were triplet births (Figure 6).

In 2023, a total of 11,658 infants were born following ART, among whom 6,255 were boys and 5,403 were girls (Table 7).

Figure 6 Percentages of Fetus Numbers of the ART Live Birth Cycles in 2023
(Denominator: 10,209 live birth cycles)



2.8.2 Weight, Gestational Weeks, and Congenital Defects

Among the 11,658 live births, 74.3% had a birthweight of at least 2,500 grams, while 25.7% weighed less than 2,500 grams; this included 2.8% below 1,500 grams and 22.9% between 1,500 and 2,499 grams. In terms of gestational weeks, 73.5% were born between 37 and 41 weeks, 26.4% before 37 weeks, and 0.1% at week 42 and beyond (Table 7). Infants with apparent physical congenital defects accounted for 1.1% of all live births. The rate of congenital defects was higher among infants weighing less than 1,500 grams (4.9%) (Table 8).

Table 7 Gender, Weight, and Gestational Weeks of ART Born Infants in 2023

Infant status		Unit: Number/%	
		Number of live births	Percentage
Gender	Male	6,255	53.7
	Female	5,403	46.3
Weight	<1,500 g	325	2.8
	1,500-2,499g	2,666	22.9
	≥ 2,500g	8,667	74.3
Gestational weeks	<37weeks	3,075	26.4
	37-41weeks	8,571	73.5
	≥ 42weeks	12	0.1
Total live births		11,658	100

Table 8 The Number of Infants with Congenital Birth Defect Born from ART and Their Proportion Among Live Births in 2023.

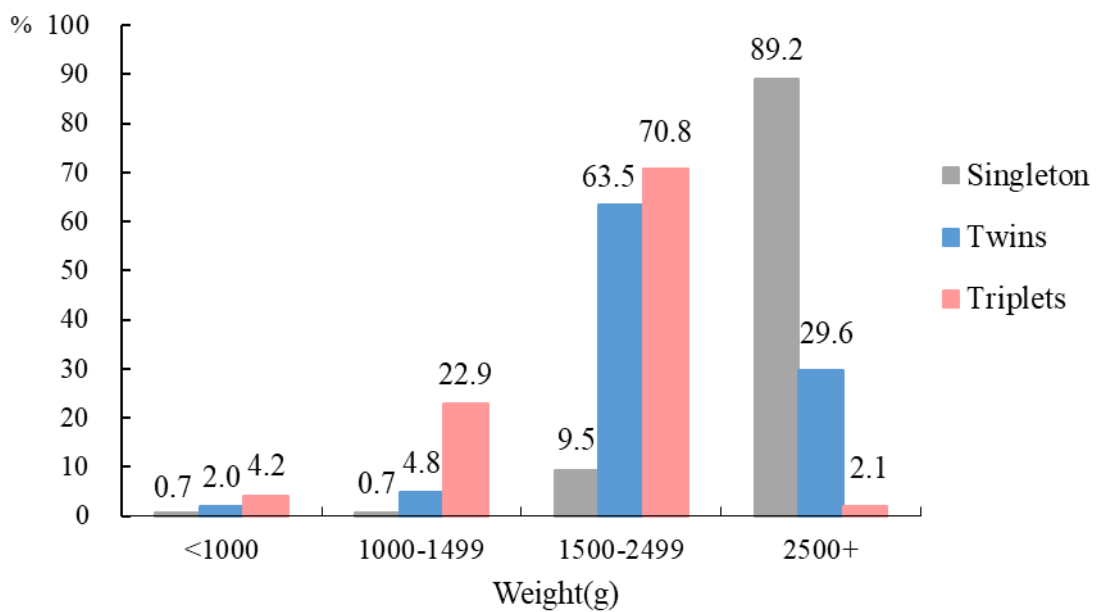
		Unit: Number/%	
Weight	Apparent or visible congenital defects	Number of live births	Percentage
<1,500g	16	325	4.9
1,500-2,499g	55	2,666	2.1
≥ 2,500g	60	8,667	0.7
Total	131	11,658	1.1

2.8.3 Relationships Between Number of Fetuses and Birthweight

There is a negative correlation between the number of fetuses and birthweight: as the number of fetuses increases, the likelihood of low birthweight also rises. Statistical results showed that among singleton births, 89.2% weighed at least 2,500 grams. Among twin births, 63.5% weighed between 1,500 and 2,499 grams, while only 29.6% weighed at least 2,500 grams. Among triplet births, 70.8% weighed between 1,500 and 2,499 grams, followed by 22.9% between 1,000 and 1,499 grams; only 2.1% weighed at least 2,500 grams (Figure 7).

Figure 7 Correlation Between Number of Births and Birth Weight of Live Birth Cycles in 2023

(Denominator: 11,658 live birth infants, percentages by number of births)



CHAPTER 3 ART Among Nationals

This chapter provides statistics on the conditions of national couples receiving different ART methods, including couples who used nondonor gametes and cases where one partner used donated gametes. Data on artificial insemination by husband (AIH) were not included. Cases were included if at least one partner was a national, while cases in which both partners were foreigners were excluded.

3.1 Number of ART Cycles Among Nationals

Among the 58,557 ART cycles in 2023, national cases accounted for 55,119 cycles (94.1%). Among them, 52,827 (95.8%) involved the use of nondonor gametes and 2,292 (4.2%) involved the use of donated gametes (Table 9).

Table 9 ART Cycles Among Nationals in 2023

Type of Cycle	Number of ART Cycles	Unit: Cycle/%
		Percentage
Use of Donated Sperm and Eggs	2,292	4.2
Use of Donor Sperm	321	0.6
Use of Donor Eggs	1,971	3.6
Use of Nondonor Sperm, Eggs or Embryos	52,827	95.8
Total number of treatment cycles	55,119	100

3.2 Age of Individuals Receiving ART Among Nationals

The age distribution of national couples receiving ART is shown in Table 10 and is similar to the age distribution of all individuals receiving ART (Table 2 of page 5).

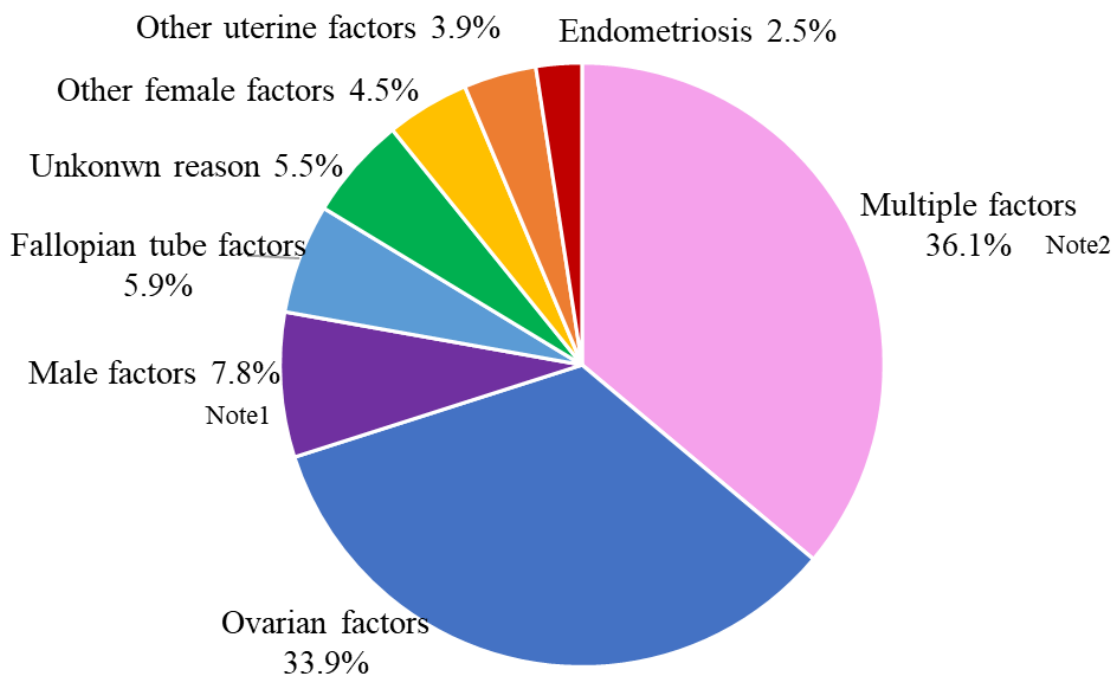
Table 10 Age-Specific Recipient Couples in ART Among Nationals in 2023

Age	Recipient Women		Recipient Men		Unit: Cycle/%
	The Number of Treatment Cycles	Percentage	The Number of Treatment Cycles	Percentage	
<25	163	0.3	39	0.1	
25-29	2,002	3.6	1,241	2.3	
30-34	10,961	19.9	8,629	15.7	
35-39	19,423	35.2	17,279	31.3	
40-44	18,646	33.8	17,466	31.7	
45-49	3,637	6.6	7,631	13.8	
≥50	287	0.5	2,834	5.1	
Total ART cycles	55,119	100	55,119	100	

3.3 Causes of Infertility Among Nationals

Causes of infertility among ROC National ART cases are shown in Figure 8, with combined factors accounting for the largest proportion (36.1%), followed by ovarian factors (33.9%) and male factors (7.8%). The distribution of infertility causes among nationals is similar to that of all ART recipients (Figure 1 of page 6).

Figure 8 Causes of Infertility in ART Among Nationals in 2023
(Denominator: 55,119 treatment cycles)



Note: 1. Source: Table 7 "Data Sheet of Assisted Reproduction Cases" of the Regulations for the Notification and Management of Assisted Reproduction Data, it is not possible to break down the percentage of male infertility causes.

Note: 2. Multiple factors refer to two or more infertility factors.

3.4 Number of Transfer Cycles and Number of Embryos Transferred Among Nationals

There were 28,736 embryo transfer cycles among nationals. Most transfers involved embryos formed from nondonor gametes (94.7%), among which frozen embryos formed from nondonor gametes (80.1%) accounted for the largest proportion (Table 11). The distribution of embryo transfer cycles among nationals was similar to that of all ART recipients (Table 5 of page 7).

Table 11 Percentage of Transfer Type in ART Among Nationals in 2023

Unit: Cycle/%		
Transfer Type	Number of Transfer Cycles	Percentage
Using nondonor embryo	27,205	94.7
Fresh embryo	4,184	14.6
Frozen embryo	23,021	80.1
Using embryo formed from donated sperm or eggs	1,531	5.3
Fresh embryo	135	0.5
Frozen embryo	1,396	4.9
Total Number of Transfer Cycles	28,736	100

3.5 Pregnancy and Live Births Among Nationals

Among the 55,119 ART cycles in nationals (including those using nondonor gametes and donated gametes), 12,677 resulted in pregnancy, 60 involved fetal reduction, and 9,504 resulted in live births, yielding a total of 10,833 infants.

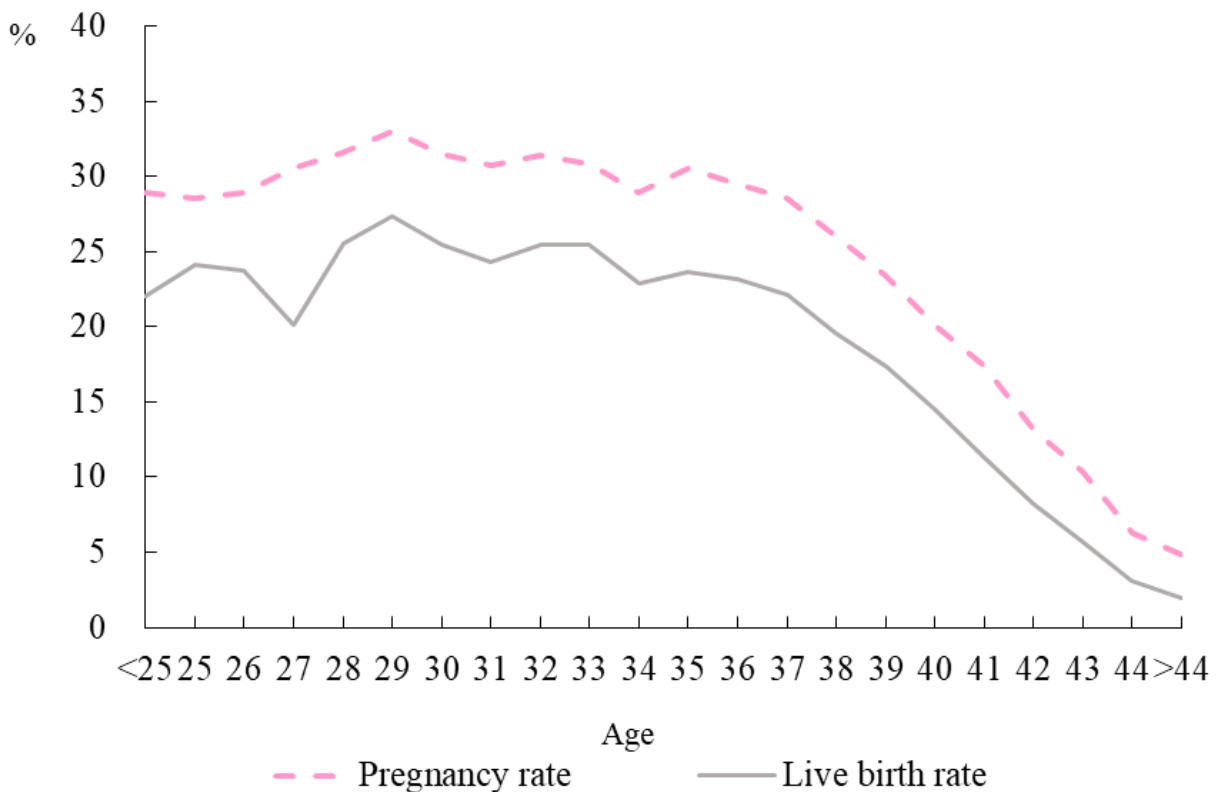
Among the 9,504 live birth cycles among nationals, 86.2% were singleton births, 13.7% were twin births, and 0.1% were triplet births. Of the 10,833 live-born infants, 5,823 were boys and 5,010 were girls.

3.6 ART Among Nationals Using Nondonor Gametes

3.6.1 Pregnancy and Live Birth Rates by Age Group for Nationals Using Nondonor Gametes

Among nationals, 52,827 ART cycles used nondonor gametes, with pregnancy and live birth rates of 22.4% and 16.8%, respectively. In calculating these rates, if all embryos were initially frozen and later thawed for transfer, both the “embryo freezing” and “embryo thawing and transfer” procedures were counted as separate treatment cycles. This may have resulted in an underestimation of the reported pregnancy and live birth rates. The relationships between recipient women’s ages and pregnancy/live birth rates are shown in Figure 9. Because the number of cycles were very small for women younger than 25 and for those older than 44, these age groups were combined for analyses. Among recipient women, both pregnancy and live birth rates declined with increasing age after 35.

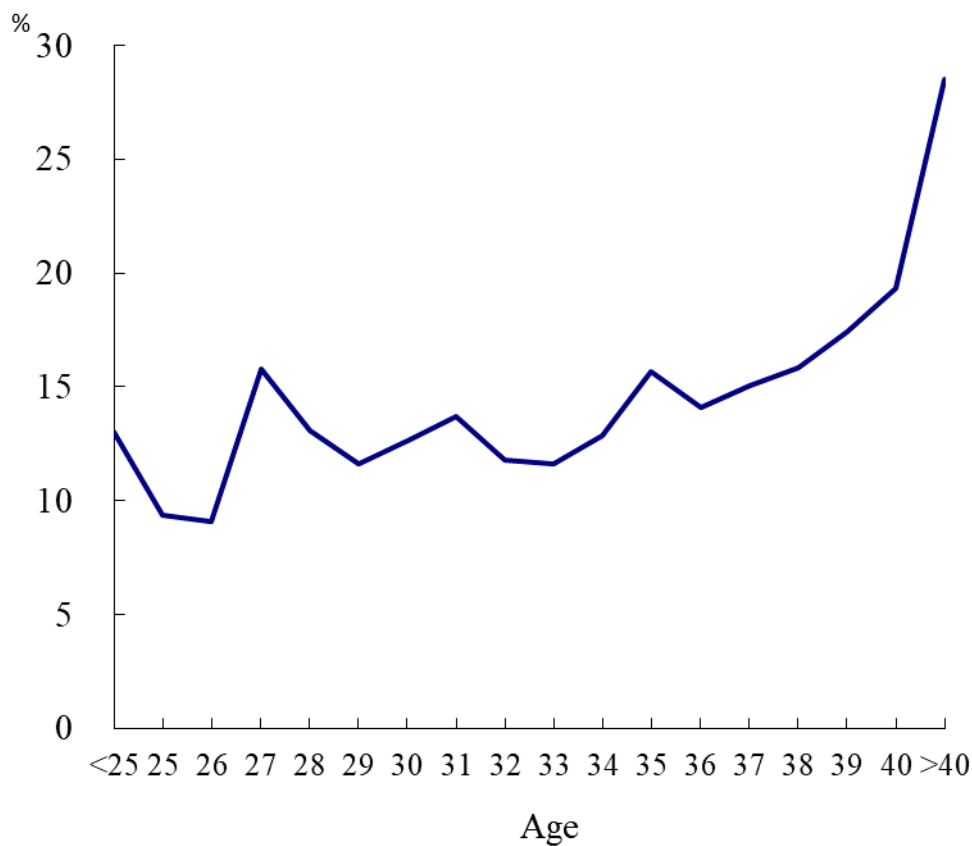
Figure 9 Correlation Between Women’s Age and Rates of Pregnancy and Live Birth, of Nondonor ART Among Nationals in 2023
(Denominator: 52,827 treatment cycles)



3.6.2 Miscarriage Rates by Age Among Nationals Using Nondonor Gametes

Among nationals who became pregnant following embryo transfers using nondonor gametes, the average miscarriage rate was 16.8% (miscarriage rate = number of miscarriage cycles / number of pregnancy cycles). The relationship between age and miscarriage rate is as follows: after the age of 36, miscarriage rates increased with age, and the average miscarriage rate for women older than 40 was 28.5% (Figure 10). Because the number of cycles was very small for women younger than 25 and for those older than 40, these age groups were combined for statistical analyses.

Figure 10 Correlation Between Age and Miscarriage Rate of the Pregnant Women After ART Using Nondonor Eggs, Sperm, or Embryos Among Nationals in 2023. (Denominator: Number of pregnancy cycles was 11,840 from nondonor ART)

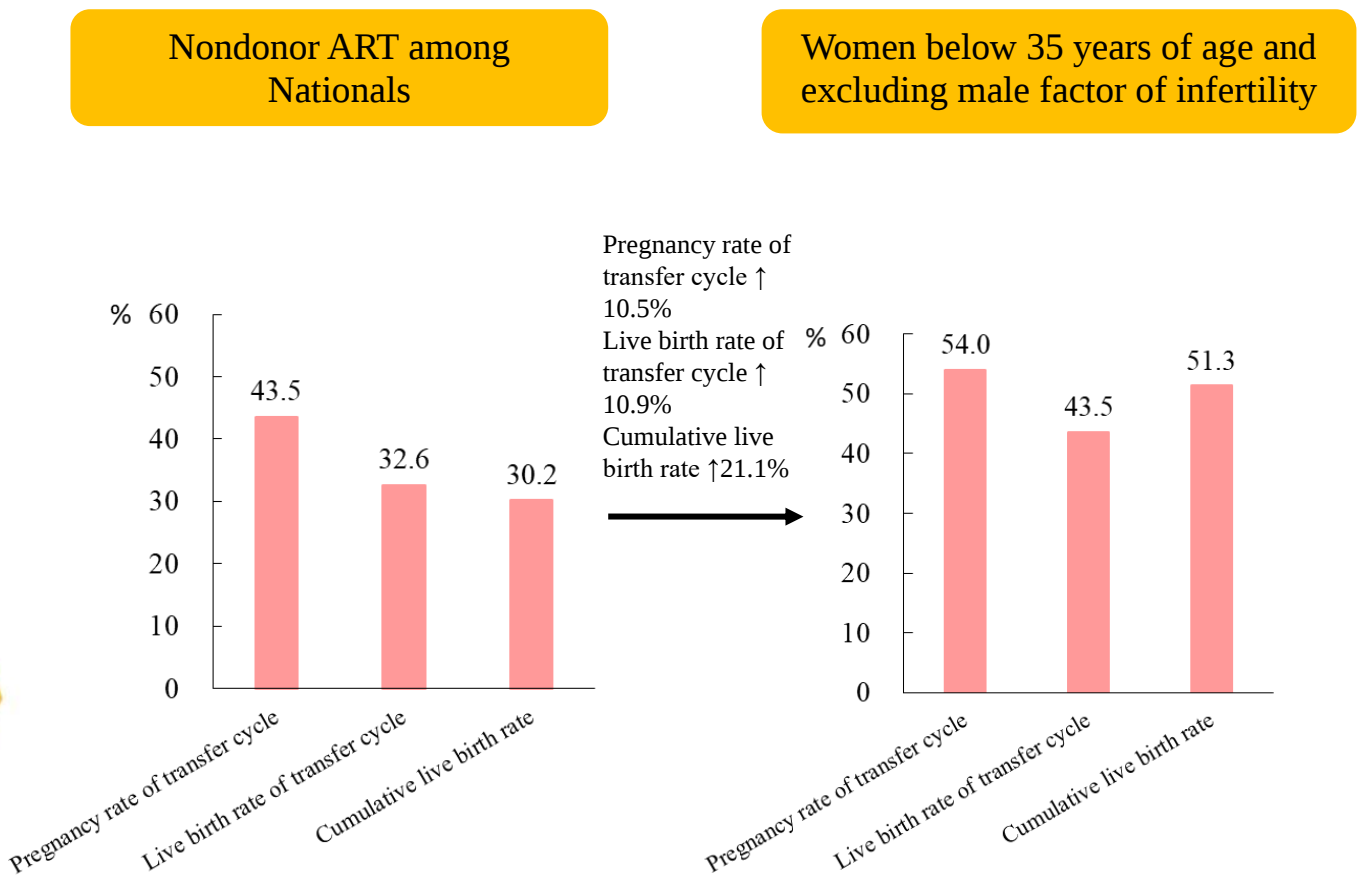


3.6.3 Pregnancy and Live Birth Rates Among Nationals for IVF procedures using Nondonor Gametes

Among 52,804 IVF cycles using nondonor gametes, there were 27,194 embryo transfer cycles, resulting in 11,834 pregnancies and 8,858 live births. The pregnancy and live birth rates per transfer were 43.5% and 32.6%, respectively, and the cumulative live birth rate per transfer was 30.2%.

For recipient women under the age of 35 years, excluding cases of infertility due to male factors, the pregnancy and live birth rates per transfer increased to 54.0% and 43.5%, respectively, and the cumulative live birth rate per transfer increased to 51.3% (Figure 11).

Figure 11 Comparison of Success Rates Between IVF Procedures Using Nondonor Gametes Among Nationals and IVF Procedures in Recipient Women under 35, Excluding Cases with Male-Factor Infertility



3.6.4 Number of Embryos Transferred and Live Birth Rates

(1) Number of Embryos Transferred

In 2023, there were 27,205 ART cycles using nondonor gametes among nationals, comprising 4,184 fresh and 23,021 frozen embryo transfer cycles. Of these transfer cycles, 94.2% involved the transfer of at most two embryos (Figure 12). By recipient age, 96.9% of recipient women aged 35 years and below received at most two embryos, and 78.7% received one embryo (Figure 13). 92.9% of recipient women aged 36 years and above received at most two embryos, and 32.1% received one embryo (Figure 14). The proportion of single-embryo transfers was higher among recipient women aged 35 years and below than among those aged 36 years and above.

Figure 12 Percentage of Number of Embryos Transferred Using Nondonor Gametes Among Nationals in 2023.

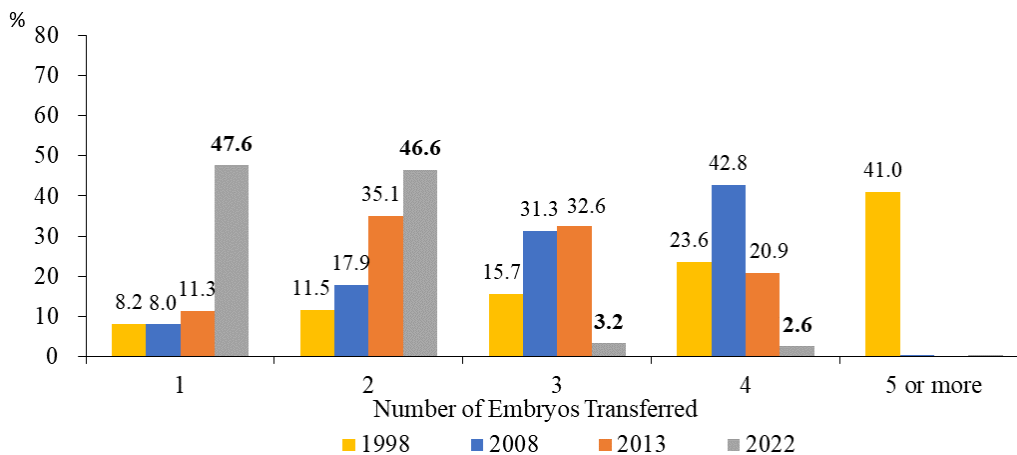


Figure 13 Percentage of Number of Embryos Transferred Using Nondonor Embryos in Women of 35 Years and Below Among Nationals in 2023.

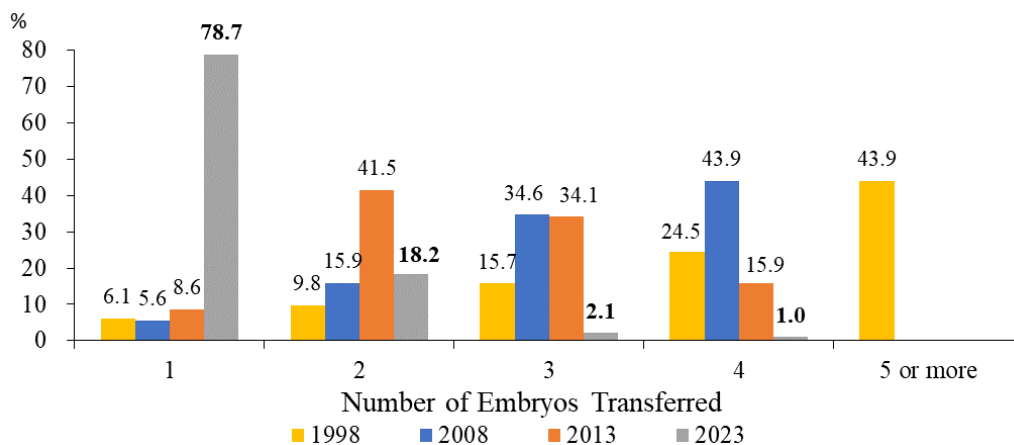
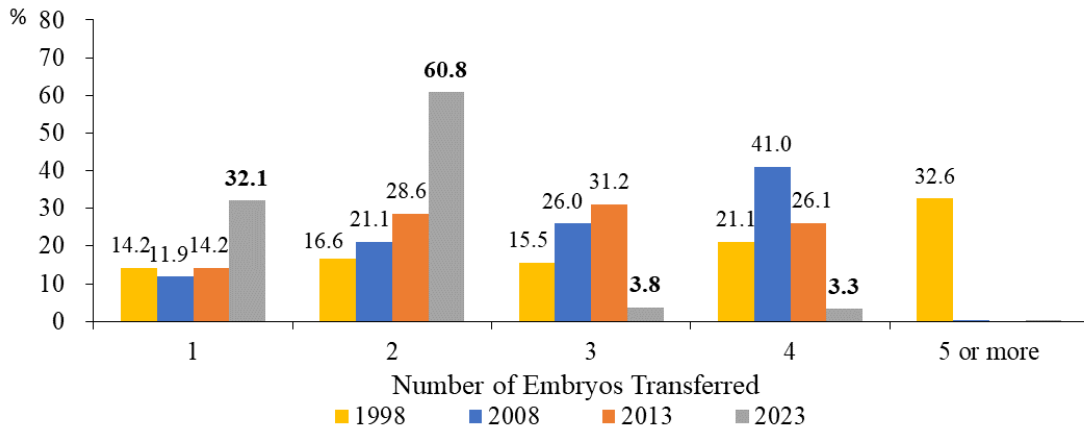


Figure 14 Percentage of Number of Embryos Transferred Using Nondonor Embryos in Women of 36 Years and Above Among Nationals in 2023.



(2) Number of Embryos Transferred From Live Birth Cycles

Among the 52,804 IVF cycles using nondonor gametes among nationals, 8,858 resulted in live births. Of these, 54.4% involved the transfer of one embryo (Figure 15). In general, the more embryos transferred, the higher the likelihood of twin or multiple births. Based on the number of embryos transferred, the live birth rate was 36.9% for single-embryo transfers and 29.3% for two-embryo transfers (Figure 16). Multiple birth rate was higher when more embryos were transferred; the multiple birth rate reached 27.2% among cycles in which two or more embryos were transferred (Figure 17).

Figure 15 The Proportion of Live Birth Cycles Based on the Number of Embryos Transferred During Nondonor IVF Procedure Among Nationals in 2023. (Denominator: 8,858 live birth cycles)

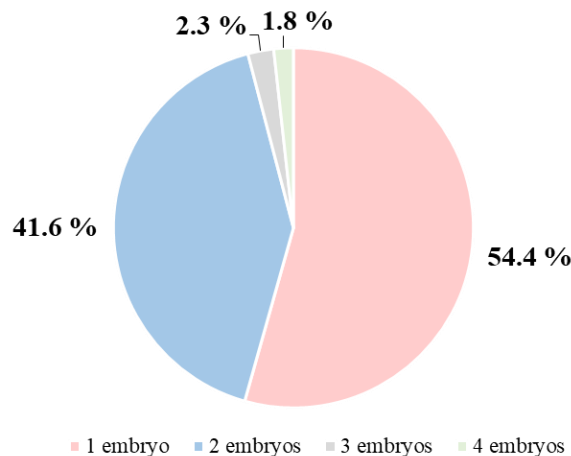


Figure 16 Correlation Between Live Birth Rates and Number of Embryos Transferred During Nondonor IVF Procedure Among Nationals in 2023.

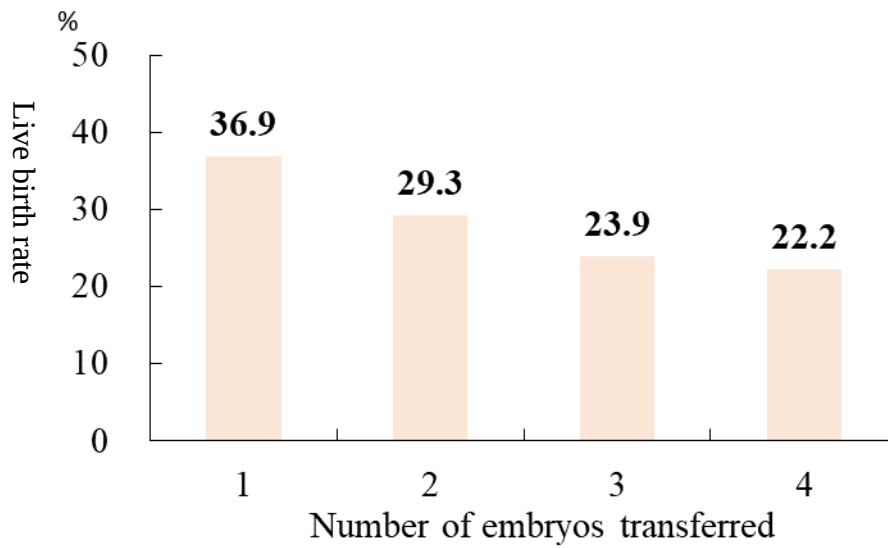
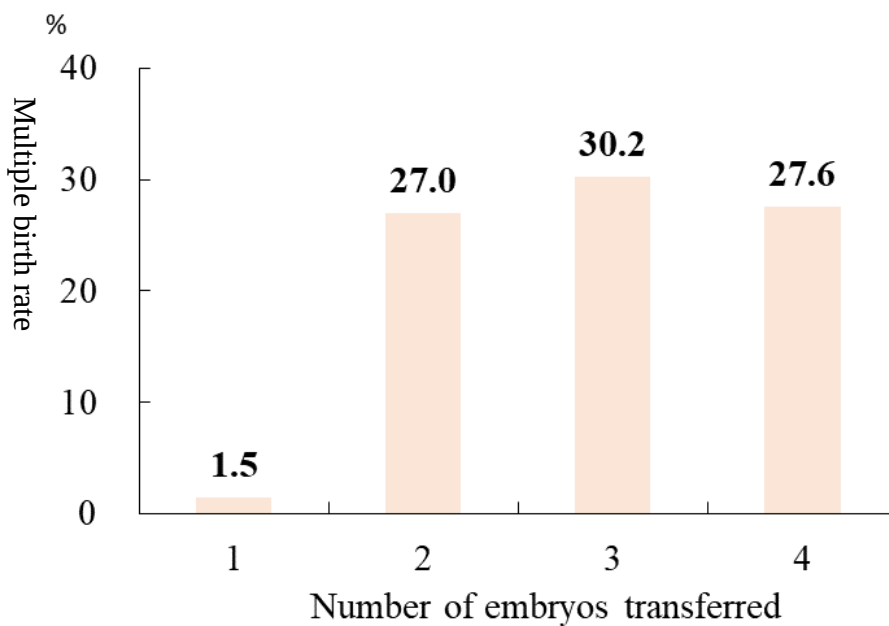


Figure 17 Correlation Between Multiple Birth Rates and Number of Embryos Transferred During Nondonor IVF Procedure Among Nationals in 2023.



3.6.5 Status of Newborn Infants and Cumulative Live Birth Rates Among Nationals for IVF procedures using Nondonor Gametes

Among the live birth outcomes of nationals receiving for IVF procedures using nondonor gametes, singleton, twin, and triplet births accounted for 86.8%, 13.1%, and 0.1%, respectively (Figure 18).

The cumulative live birth rate for nationals using nondonor gametes was 31.3%. For recipient women aged 38 years and below, the cumulative live birth rate was 50.4% (Figure 19).

Figure 18 Percentages of Live Birth Cycles Among Nationals for IVF procedures using Nondonor Gametes in 2023
(Denominator: 8,858 live birth cycles)

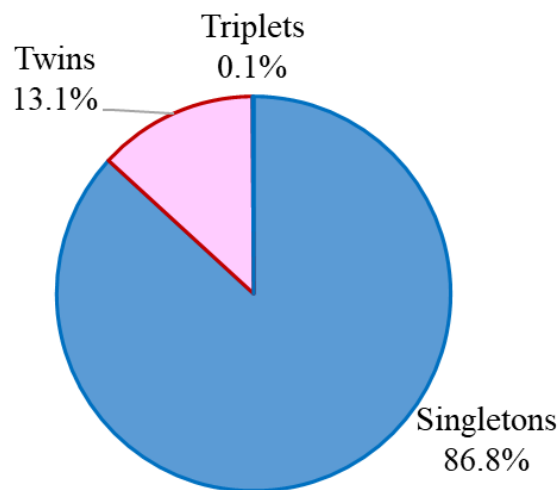
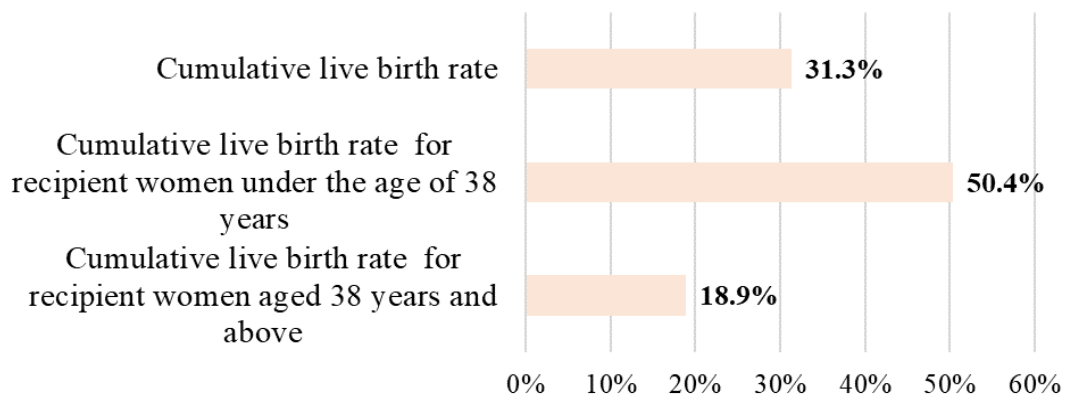


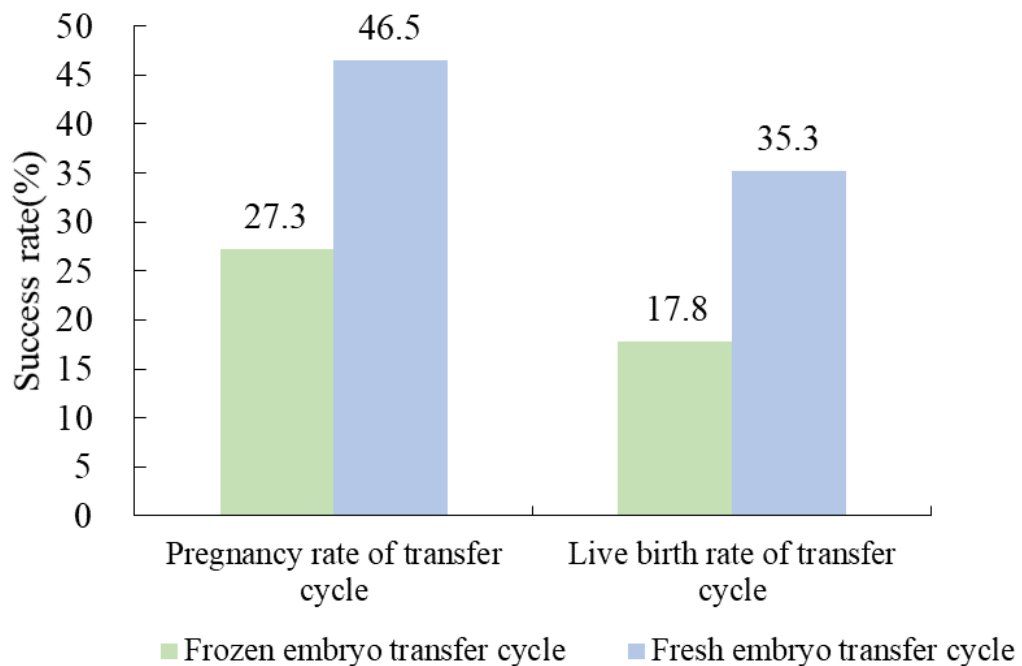
Figure 19 Cumulative Live Birth Rate Among Nationals Using Nondonor Gametes in 2023



3.6.6 Comparison Between Fresh Embryo Transfers and Frozen Embryo Transfers Among Nationals Using Nondonor Gametes

In ART cycles among nationals using nondonor gametes, 4,184 fresh embryo transfer cycles and 23,021 frozen embryo transfer cycles were compared. Statistical results showed that the pregnancy rates for fresh and frozen embryo transfer cycles were 27.3% and 46.5%, respectively, and their corresponding live birth rates were 17.8% and 35.3%, respectively (Figure 20). The type of embryo transferred was correlated with both pregnancy and live birth outcomes.

Figure 20 Comparison of the Success Rates Between Fresh Embryo and Frozen Embryo Transfer from Nondonor Gametes Among Nationals in 2023.
(Denominator: 4,184 cycles of fresh embryo transfer; 23,021 cycles of frozen embryo transfer)

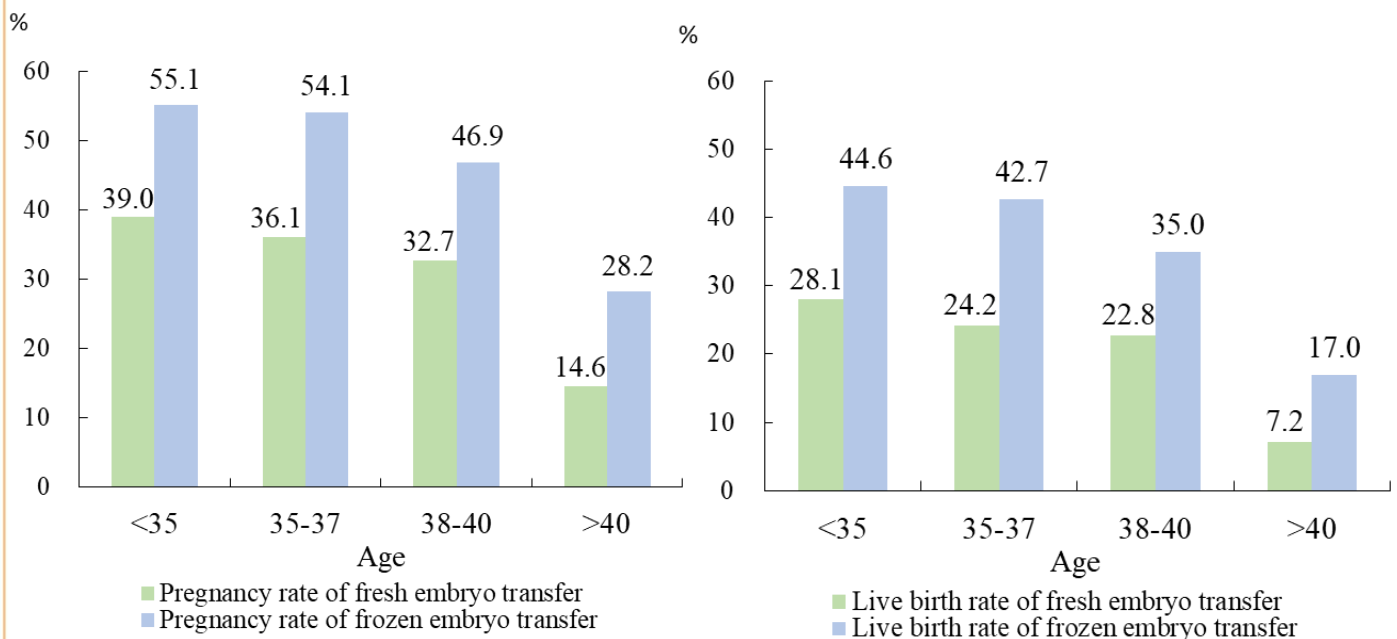


Pregnancy and live birth rates were strongly correlated with the age of the recipient women. In particular, pregnancy and live birth rates declined markedly for women over 40. Among women under 35, pregnancy rates were 39.0% for fresh embryo transfers and 55.1% for frozen embryo transfers. However, for women over 40, pregnancy rates were 14.6% for fresh embryo transfers and 28.2% for frozen embryo transfers. Similarly, among women under 35, live birth rates were 28.1% for fresh embryos and 44.6% for frozen embryos, whereas for women over 40, the rates were 7.2% and 17.0%, respectively (Figure 21).

Figure 21 Age-Specific Pregnancy and Live Birth Rate of Fresh and Frozen Embryo Transfer from Nondonor Gametes Among Nationals in 2023

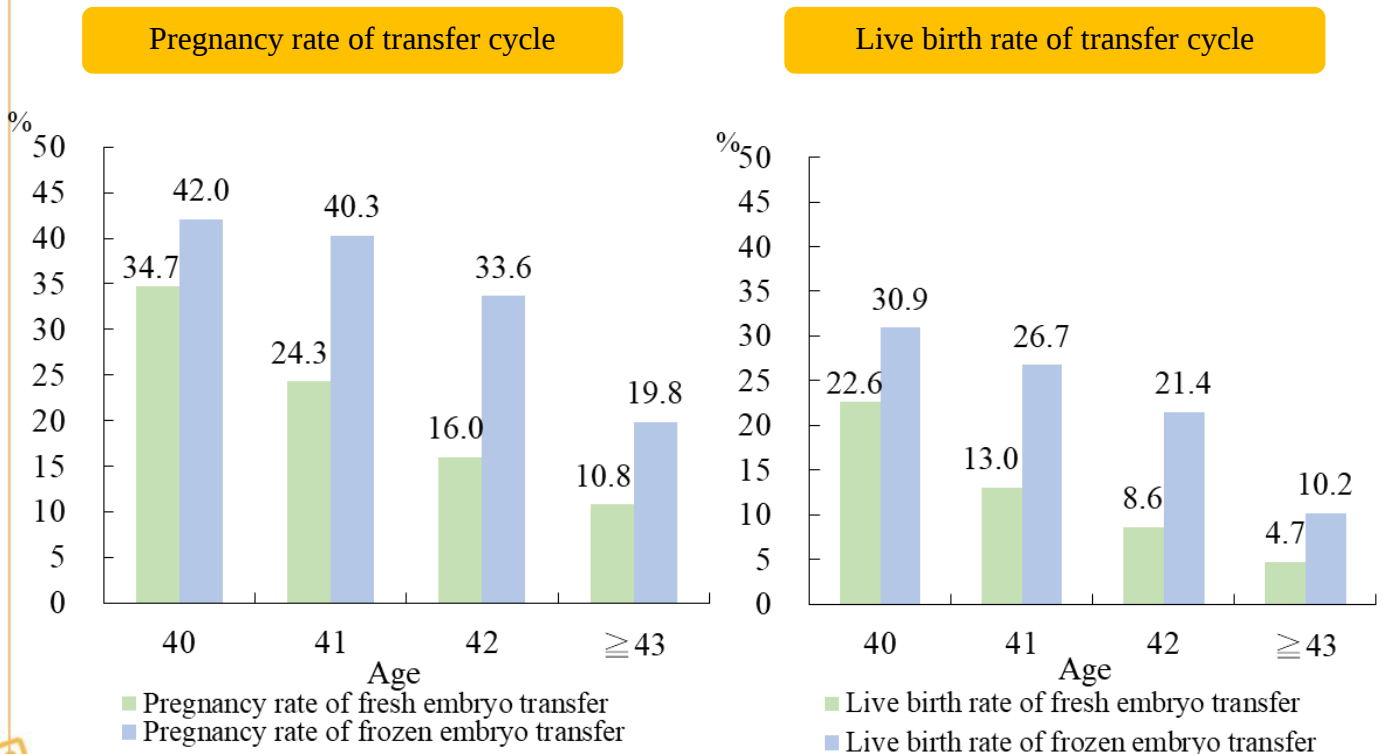
Pregnancy rate of transfer cycle

Live birth rate of transfer cycle



Among recipient women aged 40 years and above (a total of 9,248 transfer cycles), the pregnancy rates for fresh and frozen embryo transfers at the age of 40 years were 34.7% and 42.0%, respectively, and their corresponding live birth rates were merely 22.6% and 30.9%, respectively. After age 42, transfer cycle success rates declined significantly. For example, for women aged 43 and above, pregnancy rates were 10.8% for fresh embryo transfers and 19.8% for frozen transfers, with corresponding live birth rates of only 4.7% and 10.2%, respectively (Figure 22). Overall, across all age groups, both the pregnancy and live birth rates were consistently higher in frozen embryo transfer cycles than in fresh embryo transfer cycles.

Figure 22 Age-Specific Pregnancy and Live birth Rate of Fresh and Frozen Embryo Transfer in Women Age 40 and Above from Nondonor Gametes Among Nationals in 2023.



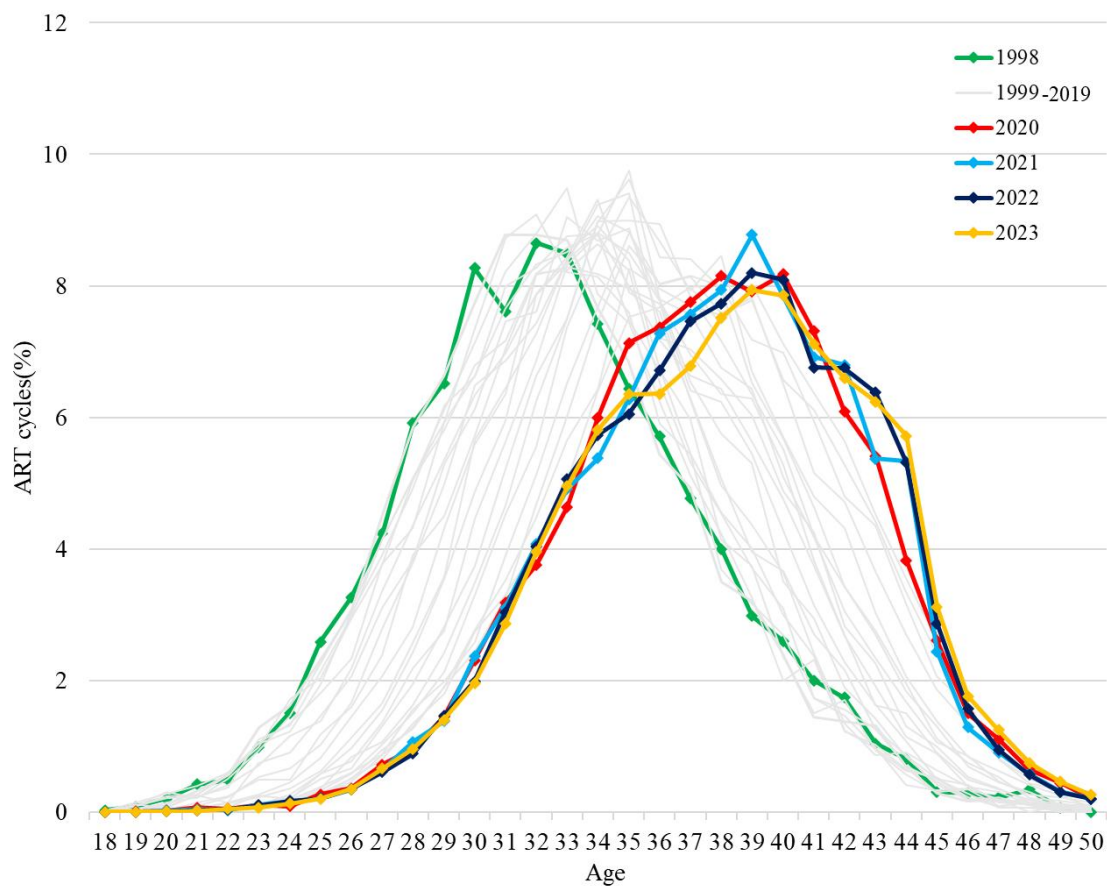
CHAPTER 4 Trend of Assisted Reproduction (1998–2023)

4.1 Trends in ART Cycles

4.1.1 Age of Treatment Recipients

The ages of recipient women receiving ART between 2020 and 2023 were higher compared with those in 1998. From 2020 to 2023, the median age remained 38 years, while the mean age increased gradually from 37.8 years in 2020 to 38.2 years in 2023 (Figure 23).

Figure 23 Age Distribution of Women Receiving ART from 1998 to 2023



4.1.2 Number of Treatment Cycles, Live Birth Cycles, and Live Births

A comparison of treatment cycles, live birth cycles, and live births from 1998 to 2023 shows that, except for 2003—when treatment cycles dropped significantly, likely due to the SARS outbreak—the number of treatment cycles remained between 6,500 and 6,700 from 2001 to 2004. Beginning in 2005, treatment cycles exceeded 7,200 and continued to increase annually. In 2020, the number of treatment cycles decreased to 38,289 compared with 44,256 in 2019 (a decrease of 13.5% reduction) due to the COVID-19 pandemic—which lowered the public’s willingness to seek medical care—and Taiwan implementing border control measures starting March 19, 2020 that prohibited the entry of foreign travelers. After the expanded IVF subsidy program on July 1, 2021, the number of treatment cycles increased from 49,652 in 2021 and continued to increase annually, reaching 58,557 in 2023 (a decrease of 52.9% compared with 2020) (Table 12).

Before 2004, the number of live birth cycles remained between 1,500 and 1,800 annually. After 2005, the number exceeded 2,000, likely due to increased ART utilization and advances in domestic ART technologies since 2004. The number of live births ranged from 2,300 to 2,900 infants annually between 1998 and 2007. From 2008 to 2014, annual live births increased to 3,100–6,900, and from 2015 to 2022, they rose further to 8,254–11,549, with a decline in 2020 due to the COVID-19 pandemic. In 2023, live births reached 11,658, 109 more than in 2022 (Table 12).

To more clearly understand ART utilization among nationals, beginning in 2008, statistics have separately reported the number of treatment cycles, live birth cycles, and live births for recipient couples in which at least one partner is a national. The number of treatment cycles, live birth cycles, and live births for nationals in 2023 were 55,119, 9,504, and 10,833, respectively, which were all lower than those in 2022 (i.e., 57,759, 9,848, and 11,348, respectively) (Table 12 and Figure 24).



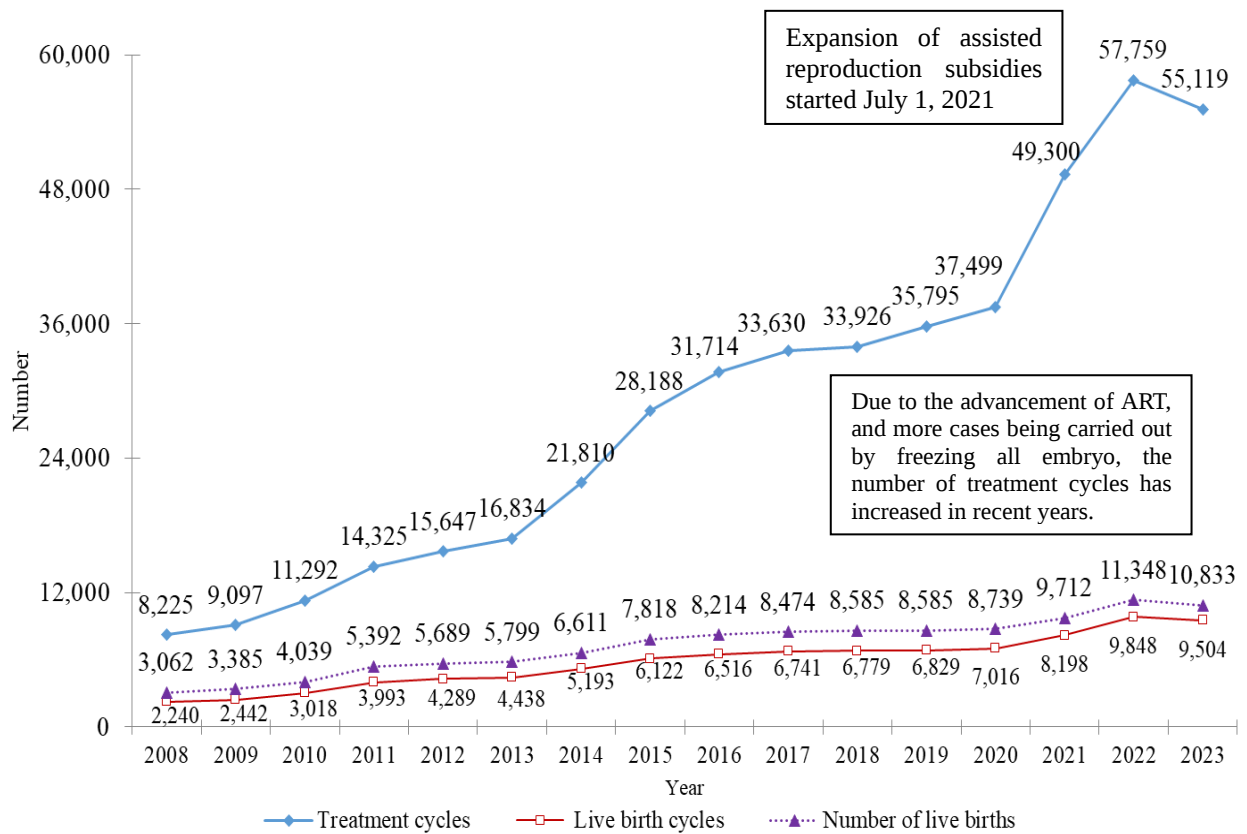
Table 12 The Number of ART Cycles, Live Birth Cycles, and Live Births from 1998 to 2023

Year	Treatment cycles (unit: cycle)	Live birth cycles (unit: cycle)	Number of live births (unit: infant)	ROC Nationals ^{Note 2}		
				Number of treatment cycles (unit: cycle)	Live birth cycles (unit: cycle)	Number of live births (unit: infant)
1998	7,146	1,585	2,317			-
1999	6,965	1,586	2,271			-
2000	7,037	1,663	2,357			-
2001	6,458	1,645	2,381			-
2002	6,622	1,722	2,466			-
2003	5,831	1,580	2,270			-
2004	6,791	1,849	2,598			-
2005	7,346	2,037	2,841			-
2006	7,281	2,021	2,791			-
2007	7,945	2,139	2,924			-
2008	8,360	2,268	3,098	8,225	2,240	3,062
2009	9,266	2,495	3,464	9,097	2,442	3,385
2010	11,517	3,072	4,122	11,292	3,018	4,039
2011	14,645	4,060	5,486	14,325	3,993	5,392
2012	16,041	4,394	5,825	15,647	4,289	5,689
2013	17,393	4,585	5,988	16,834	4,438	5,799
2014	22,684	5,387	6,857	21,810	5,193	6,611
2015	29,720	6,454	8,254	28,188	6,122	7,818
2016	34,486	7,132	8,988	31,714	6,516	8,214
2017	37,849	7,654	9,590	33,630	6,741	8,474
2018	39,840	8,113	10,236	33,926	6,779	8,585
2019	44,256	8,583	10,678	35,795	6,829	8,585
2020	38,289	7,187	8,944	37,499	7,016	8,739
2021	49,652	8,249	9,774	49,300	8,198	9,712
2022	58,476	10,012	11,549	57,759	9,848	11,348
2023	58,557	10,209	11,658	55,119	9,504	10,833
Total	560,453	117,681	149,727			

Note:

1. The number of live births is based on the patients' treatment year but not their actual year of birth.
2. If one of the couple receiving ART is a ROC National, he or she will be included in the analysis, excluding those who are both foreign nationals.

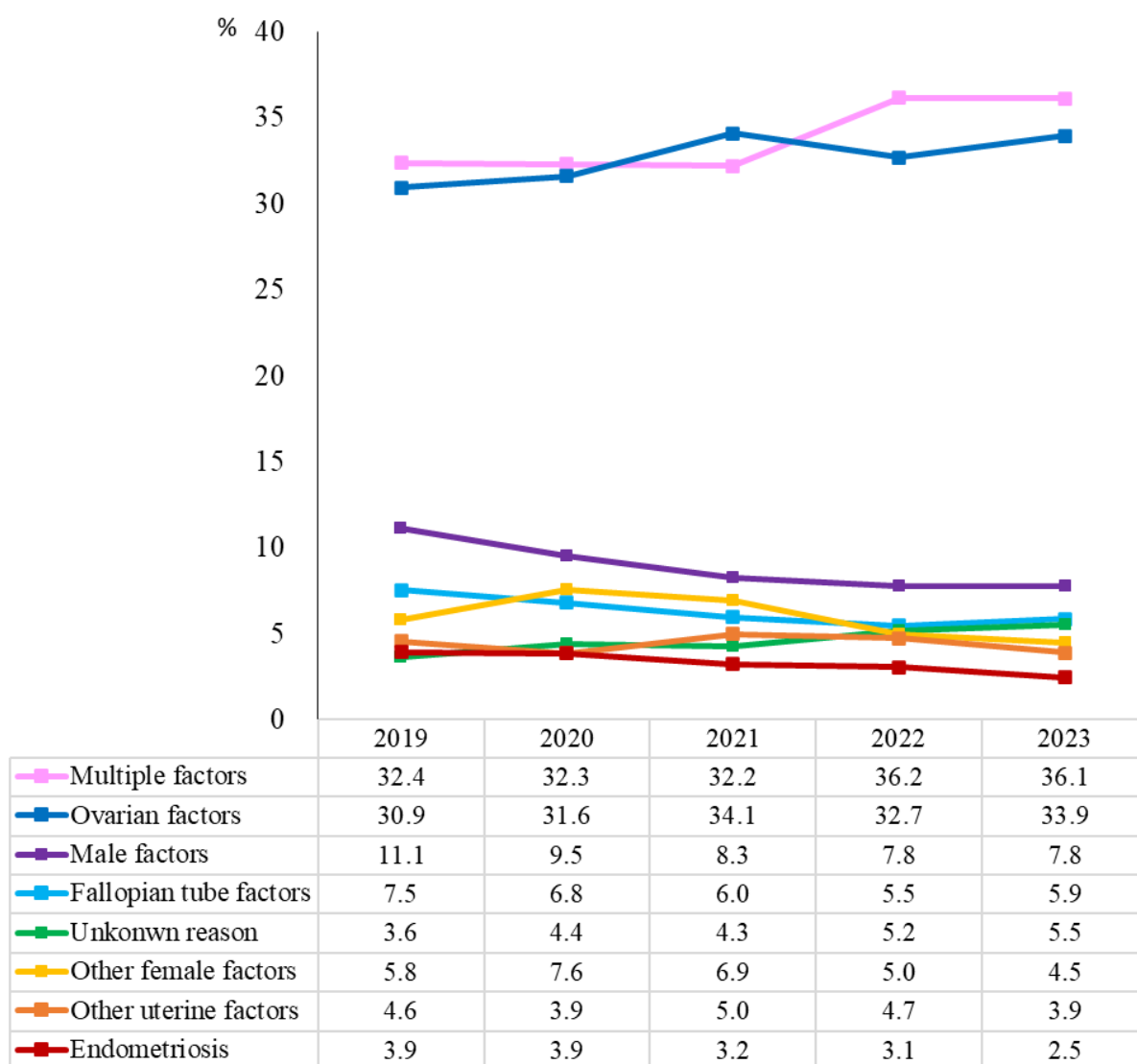
Figure 24 The Number of ART Cycles, Live Birth Cycles, and Live Births from 2008 to 2023.



4.1.3 Causes of Infertility Among National Couples

In 2015, the Regulations for Assisted Reproduction Information Notification and Administration were amended, expanding the classification of infertility causes from five to eight categories and adding ovarian factors, endometriosis, and other uterine factors. Over the past five years, the three most common causes of infertility have been combined factors, ovarian factors, and male factors, with combined factors ranking the highest in 2023 (Figure 25).

Figure 25 Causes of Infertility Among Nationals Couples - 2019 to 2023



4.1.4 Pregnancy and Live Birth Rates Among Nationals

Between 2008 and 2023, the pregnancy and live birth rates per transfer among nationals peaked in 2011, reaching 37.5% and 27.9%, respectively. Since 2011, the numbers continued to decline, reaching 23.0% and 17.2% in 2023, respectively (Figure 26). In recent years, an increasing number of ART cycles have adopted complete embryo cryopreservation, leading to a rise in the number of treatment cycles without corresponding embryo transfers. Consequently, cumulative pregnancy and live birth rates now provide a more accurate reflection of ART performance.

The cumulative pregnancy rate increased slightly from 41.3% in 2008 to 46.6% in 2018, followed by a slight decrease from 44.9% in 2019 to 41.9% in 2023. Similarly, the cumulative live birth rate increased slightly from 30.8% in 2008 to 34.8% in 2018, followed by a slight decrease to 31.4% in 2023 (Figure 27).

Figure 26 Pregnancy Rate and Live Birth Rate of ART Among Nationals from 2008 to 2023.

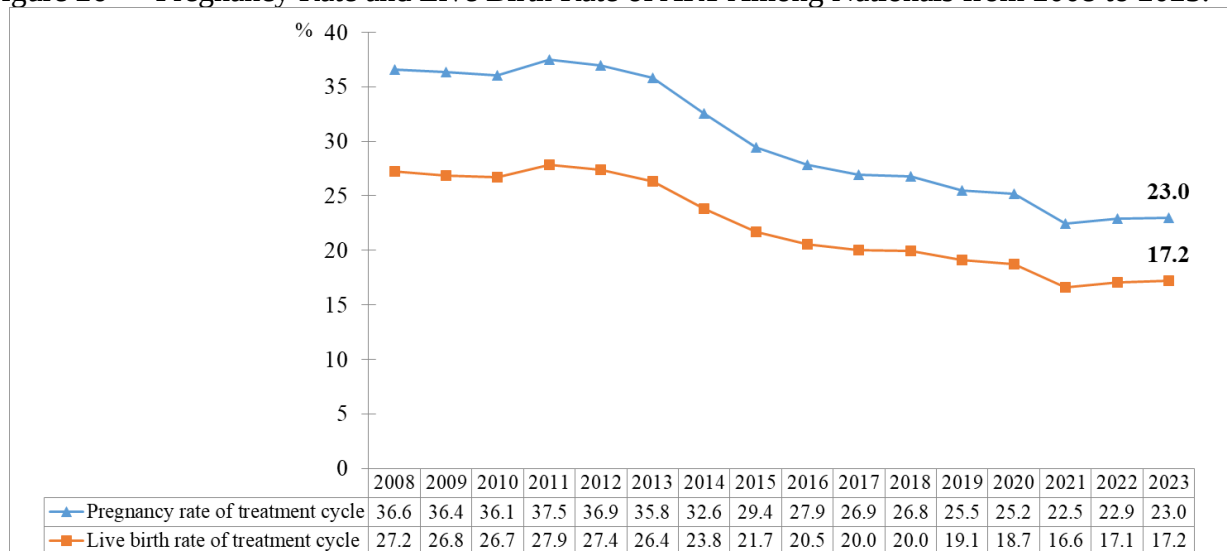
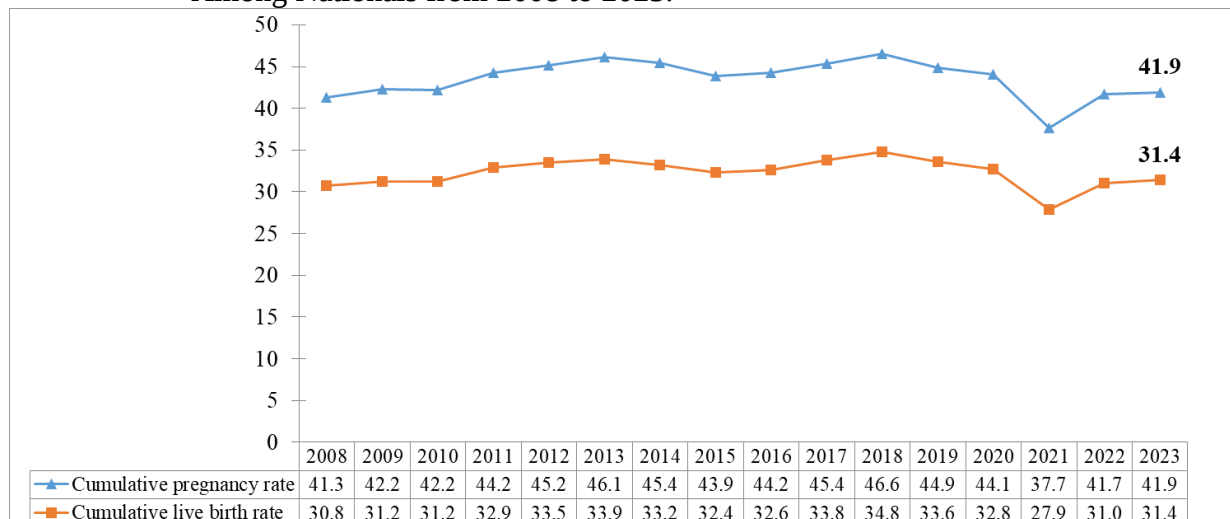


Figure 27 Cumulative Pregnancy Rate and Cumulative Live Birth Rate of the ART Cycles Among Nationals from 2008 to 2023.



4.2 Trends in Transfer Cycle Success Rates Among Nationals

Among nationals receiving ART, the pregnancy and live birth rates for fresh embryo transfers decreased from 40.0% and 29.9% in 2008 to 28.5% and 18.9% in 2023, respectively. For frozen embryo transfers, the pregnancy and live birth rates increased from 38.5% and 28.2% in 2008 to 50.0% and 37.6% in 2020, followed by a slight decrease to 46.9% and 35.6% in 2023, respectively. Since 2009, both the pregnancy and live birth rates for frozen embryo transfers have consistently exceeded those for fresh embryo transfers (Figure 28 and Figure 29).

Figure 28 Pregnancy Rate of Transfer Cycles Using Fresh and Frozen Embryos Among Nationals from 2008 to 2023.

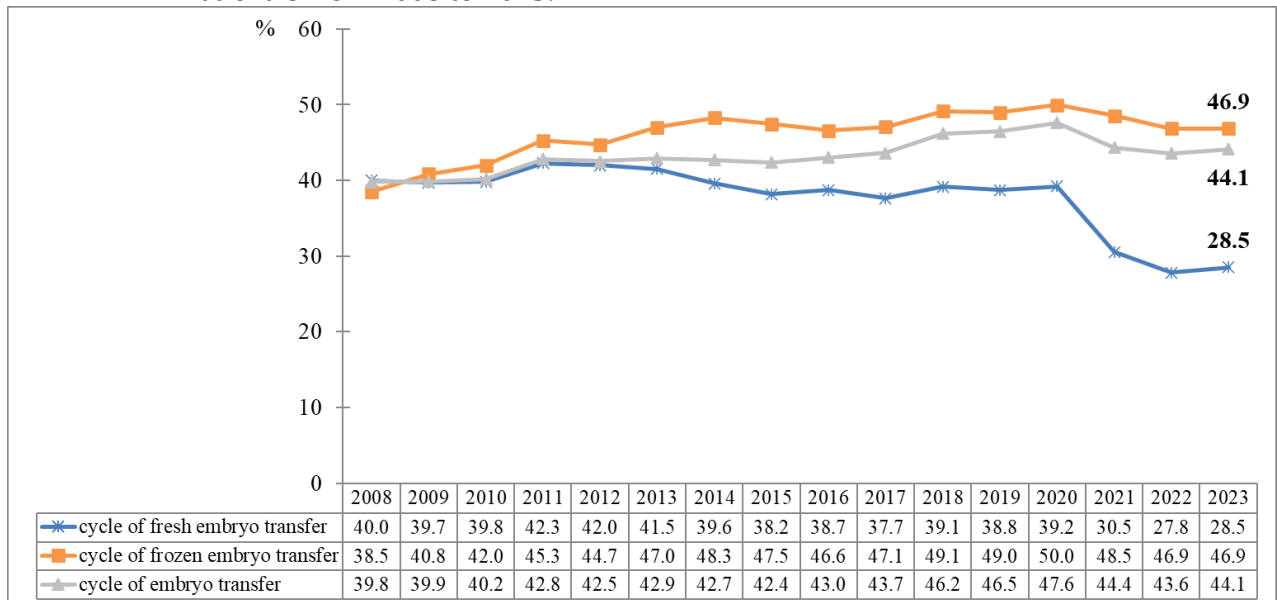
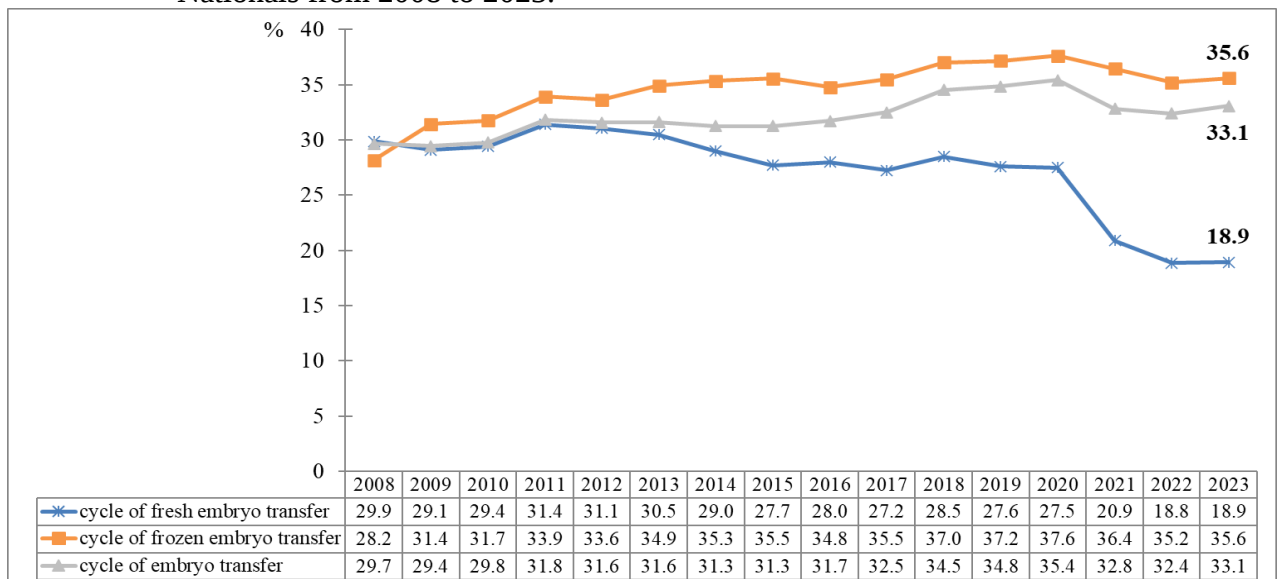
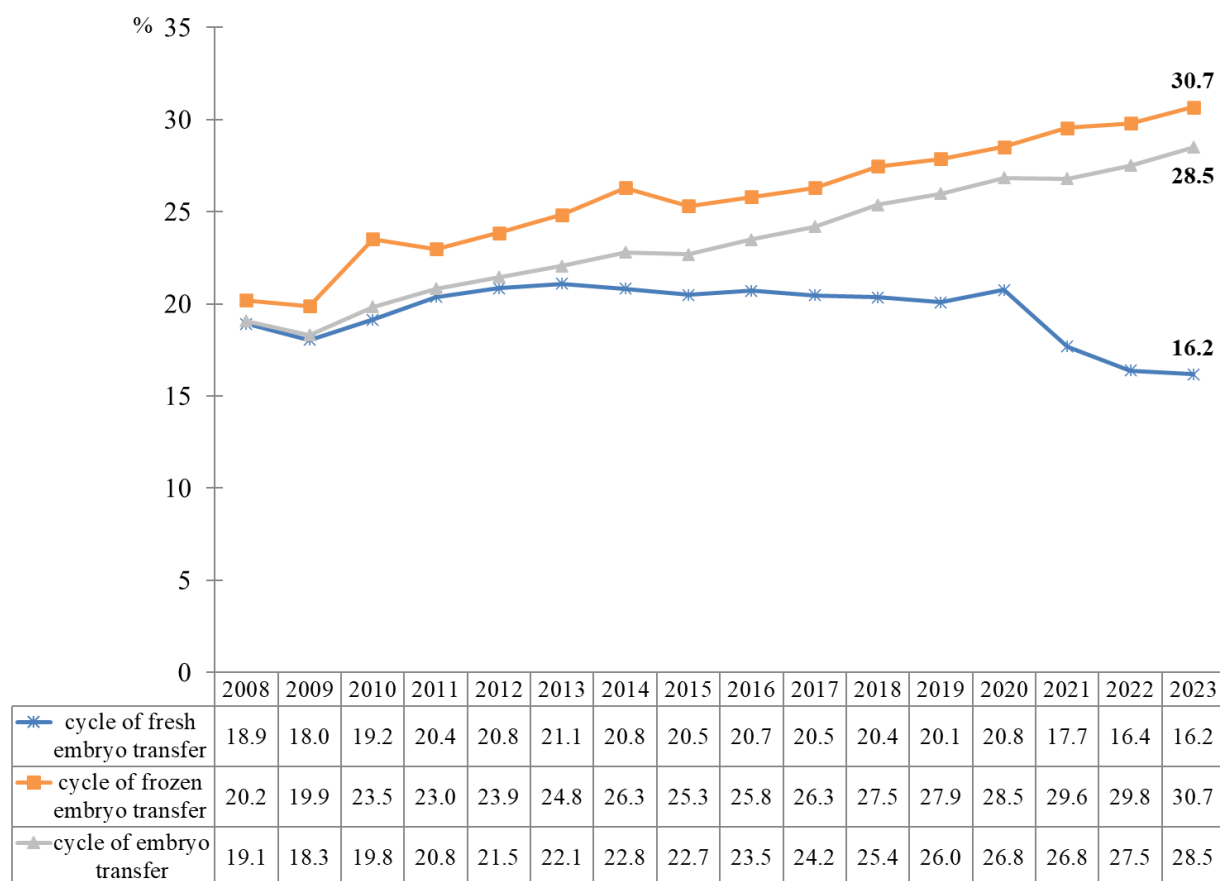


Figure 29 Live Birth Rate of Transfer Cycles Using Fresh and Frozen Embryos Among Nationals from 2008 to 2023.



Since 2008, the singleton live birth rate per transfer cycle has shown an upward trend, reflecting advances in ART technologies and improved maternal preparation for optimal embryo transfers. As the proportion of frozen embryo transfers increased, the singleton live birth rate for frozen embryo transfers increased from 19.9% in 2009 to 30.7% in 2023. For fresh embryo transfers, the singleton live birth rate increased from 18.0% in 2009 to 20.8% in 2020, followed by a decrease to 16.2% in 2023. Since 2008, the singleton live birth rate for frozen embryo transfers has consistently exceeded that for fresh embryo transfers (Figure 30).

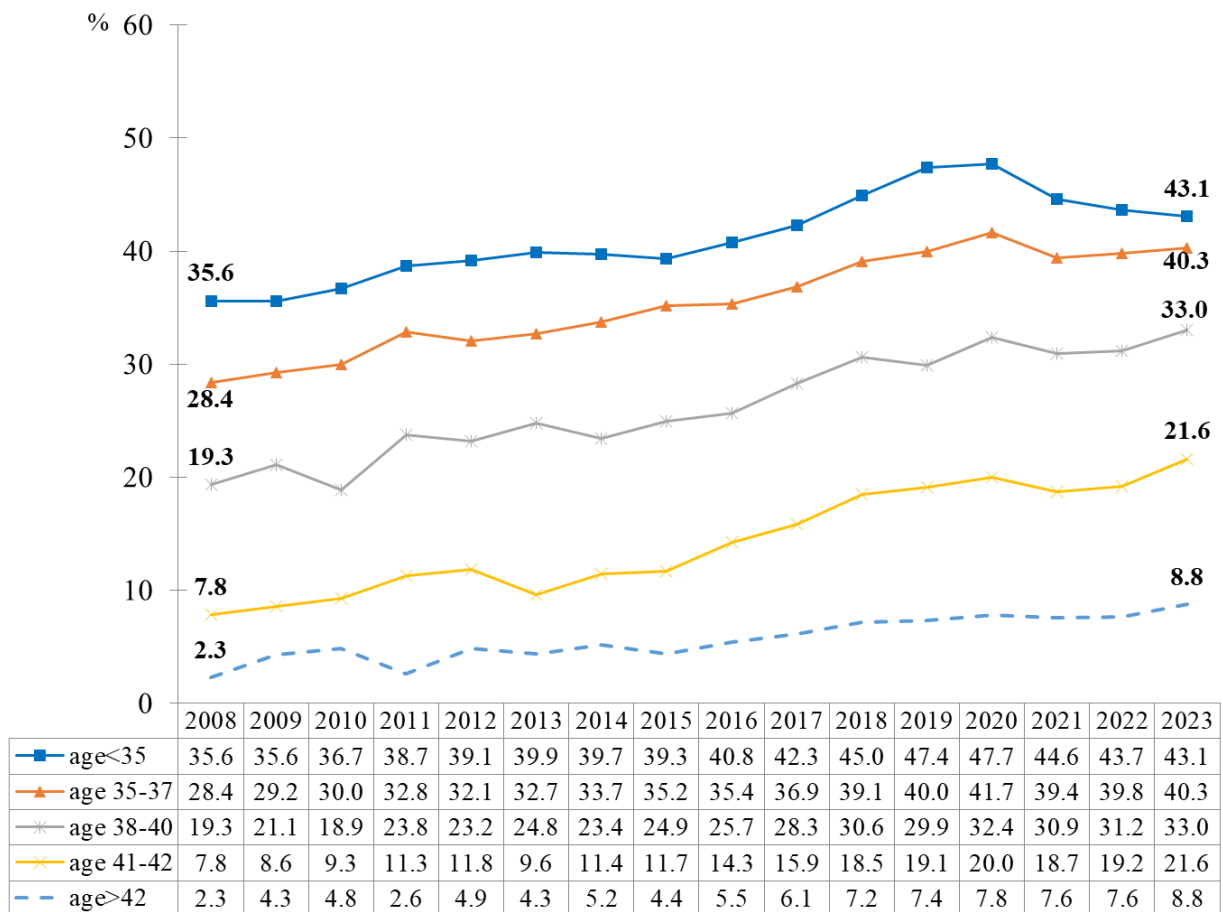
Figure 30 Singleton Live Birth Rate of Transfer Cycles Using Fresh and Frozen Embryos Among Nationals from 2008 to 2023



4.3 Transfer Cycle Success Rate Trends by Age Group Among Nationals

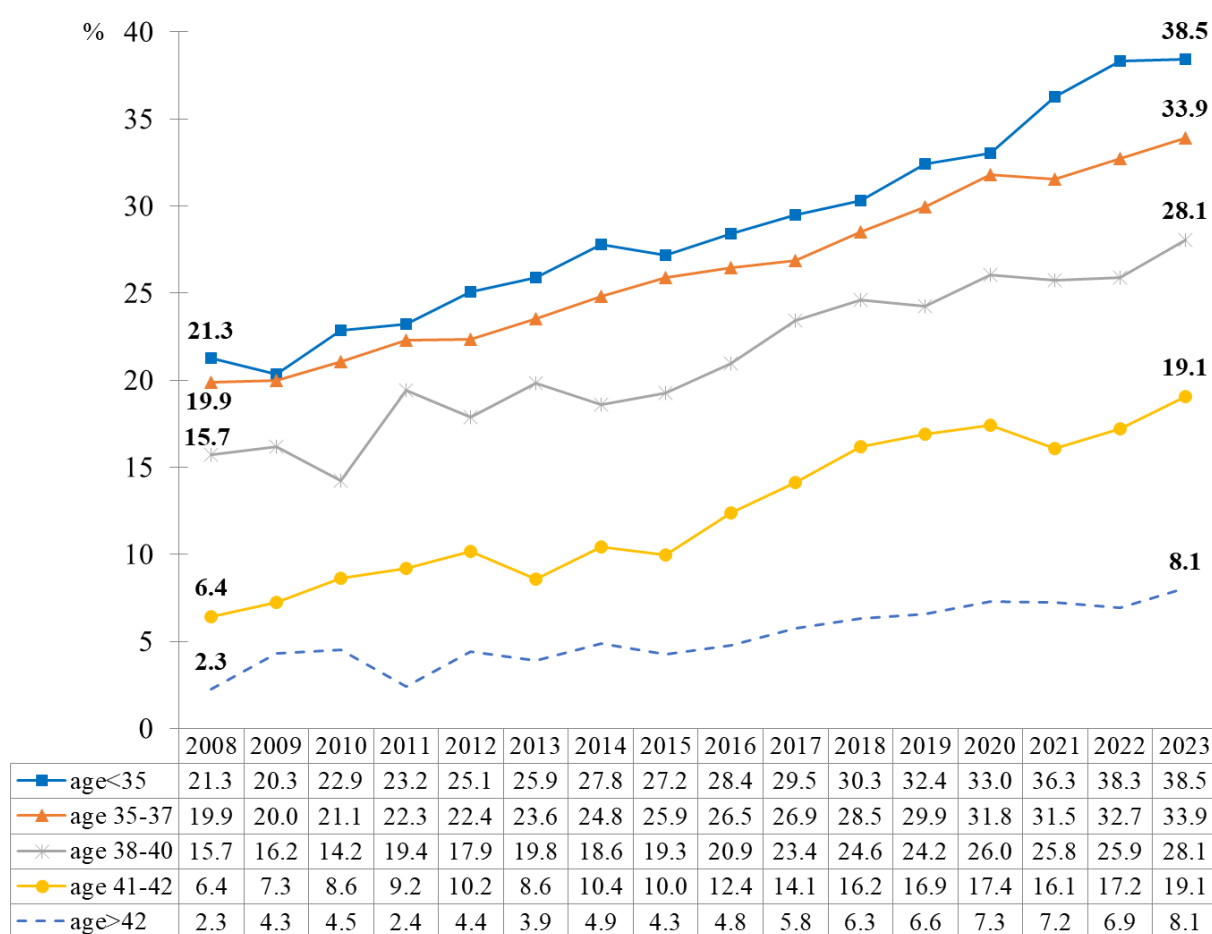
Because live birth rates for transfer cycles using donated eggs are affected by the age of the donors, our analyses focused solely on transfer cycles using nondonor gametes. From 2008 to 2020, live birth rates for transfer cycles across all age groups showed an overall upward trend, followed by a slight decline. Among recipient women under the age of 35 years, the live birth rate increased from 35.6% in 2008 to 47.7% in 2020, followed by a slight decrease to 43.1% in 2023. Compared with 2008, the live birth rate per transfer cycle in 2023 increased by 11.9% for recipient women aged 35–37 years, 13.7% for those aged 38–40 years, 13.8% for those aged 41–42, and 6.5% for those aged 42 and above. (Figure 31).

Figure 31 Live Birth Rate of Transfer Cycles Using Nondonor Gametes Among Nationals from 2008 to 2023 (For Age-Specific Women Undergoing ART)



For singleton live birth rates, they increased from 21.3% in 2008 to 38.5% in 2023 for recipient women under the age of 35 years. Compared with 2008, the singleton live birth rate for transfer cycles in 2023 increased by 14.0% among recipient women aged 35–37 years, 12.4% among those aged 38–40 years, 12.7% among those aged 41–42 years, and 5.8% among those aged 42 years and above. For all age groups, the singleton live birth rate in 2023 increased compared with 2022 (Figure 32).

Figure 32 Singleton Live Birth Rate of Transfer Cycles Among Nationals Using Nondonor Gametes from 2008 to 2023 (For Age-Specific Women Undergoing ART)

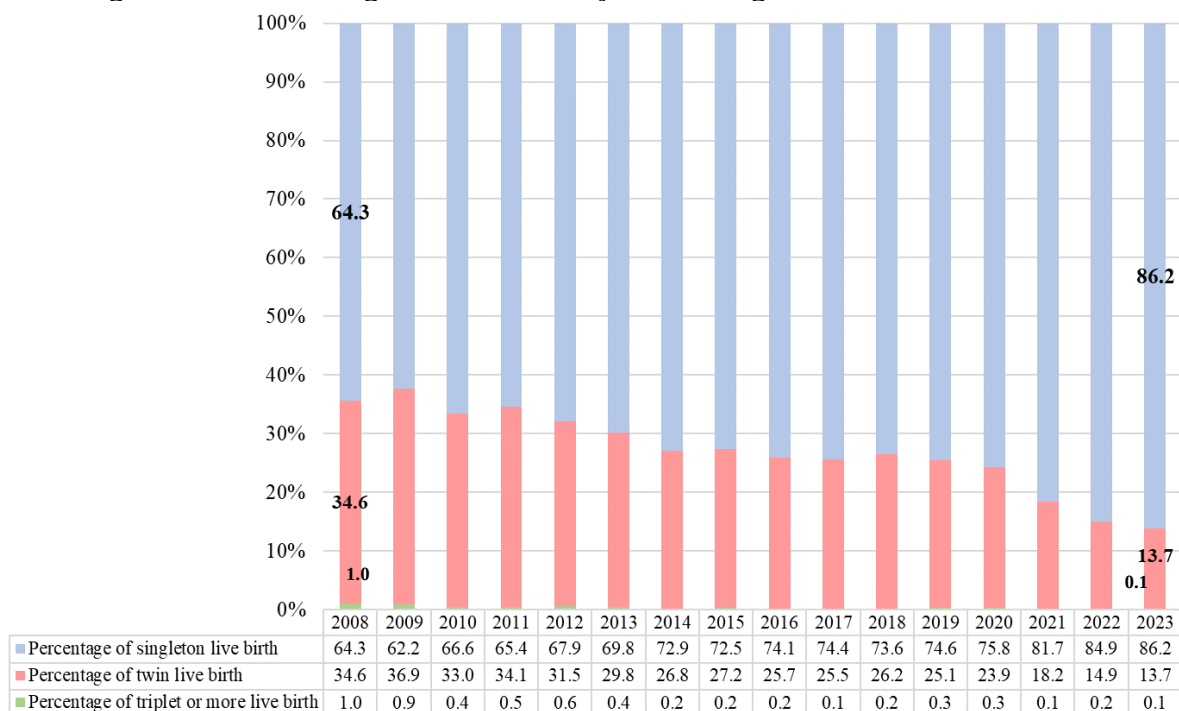


4.4 Number of Fetuses in Live Birth Cycles, Birth Weights, and Weeks of Gestation Among Nationals

Singleton Live birth percentage is an important indicator in measuring the success rate, because singleton live birth has lower risks than multiple birth, including preterm birth, low birth weight, congenital defects, mortality, etc. To effectively support ART institutes to reduce the percentage of multiple births, the HPA has included “The ratio of women under the age of 35 who have had less than two embryos transferred within the current permit period” as one of the indicators for permit evaluation of ART institutes. Starting from July 1, 2021, the government implemented an expanded IVF subsidy program, stipulating that women under the age of 35 can only transfer one embryo in an IVF cycle, and those between the ages of 36 and 44 can only transfer one or two embryos in an IVF cycle, in order to be eligible for the subsidy.

Among live birth cycles for nationals receiving ART, the percentage of singleton births increased from 64.3% in 2008 to 86.2% in 2023, while that of multiple births decreased from 35.6% to 13.8% (Figure 33).

Figure 33 Percentage of Live Birth Cycles Among Nationals from 2008 to 2023



Regarding birthweight, among live-born infants of nationals receiving ART, from 2008 to 2023, infants weighing less than 1,500 grams decreased from 5.6% to 2.8%; those weighing 1,500–2,499 grams decreased from 37.3% to 22.6%; and those weighing at least 2,500 grams increased from 57.1% to 74.6% (Figure 34). Regarding gestational age, the proportion of infants born before 37 weeks decreased from 44.4% in 2008 to 26.2% in 2023, while those born between 37 and 41 weeks increased from 55.6% to 73.8% (Figure 35).

Figure 34 Birth Weight of Live Birth Cycles Among Nationals from 2008 to 2023

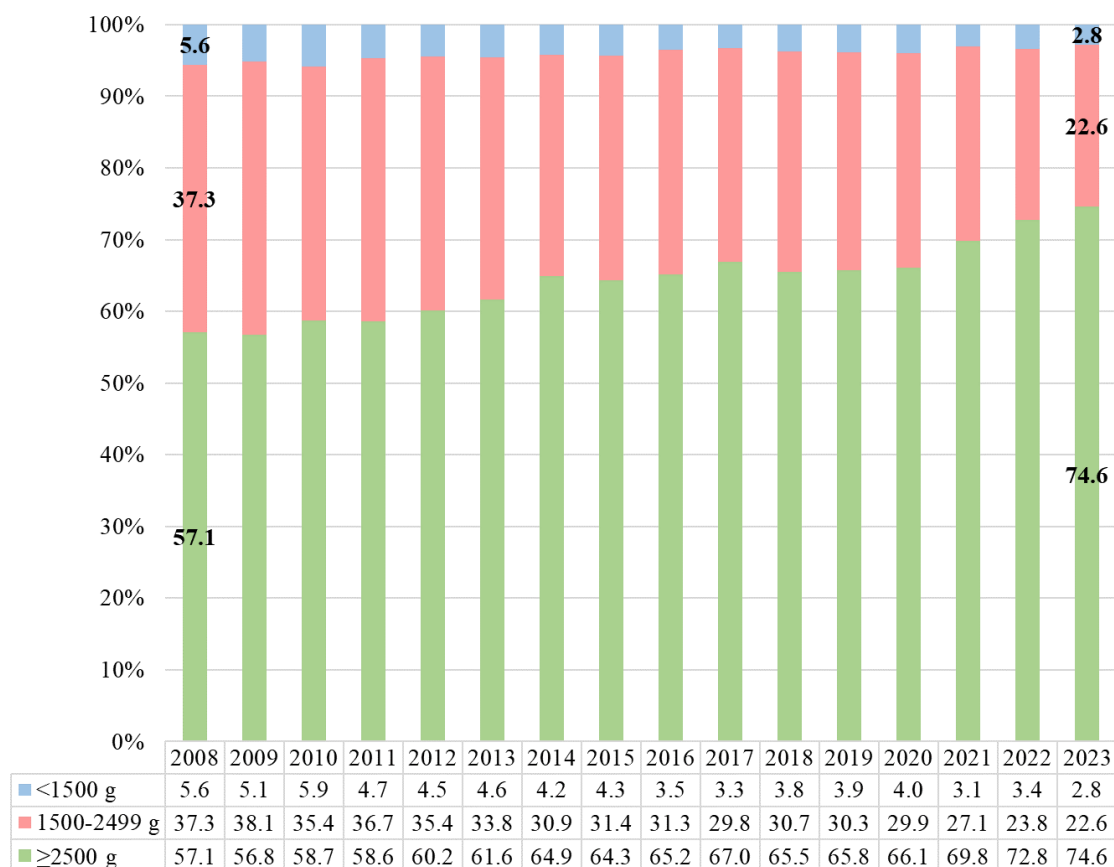
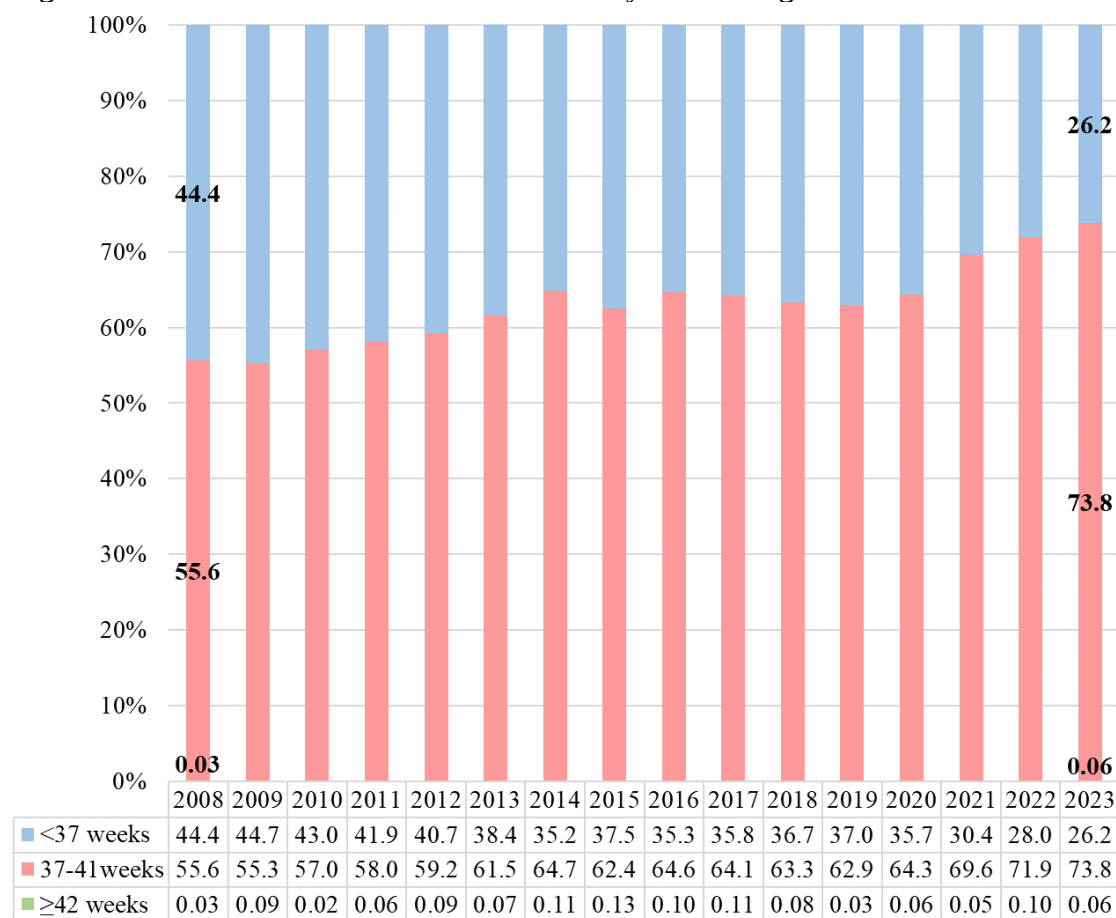


Figure 35 Gestational Weeks of Live Birth Cycles Among Nationals from 2008 to 2023.



Appendix 1: Data Processing for the Analyses of ART Outcomes

1. Data from the ART Reporting System

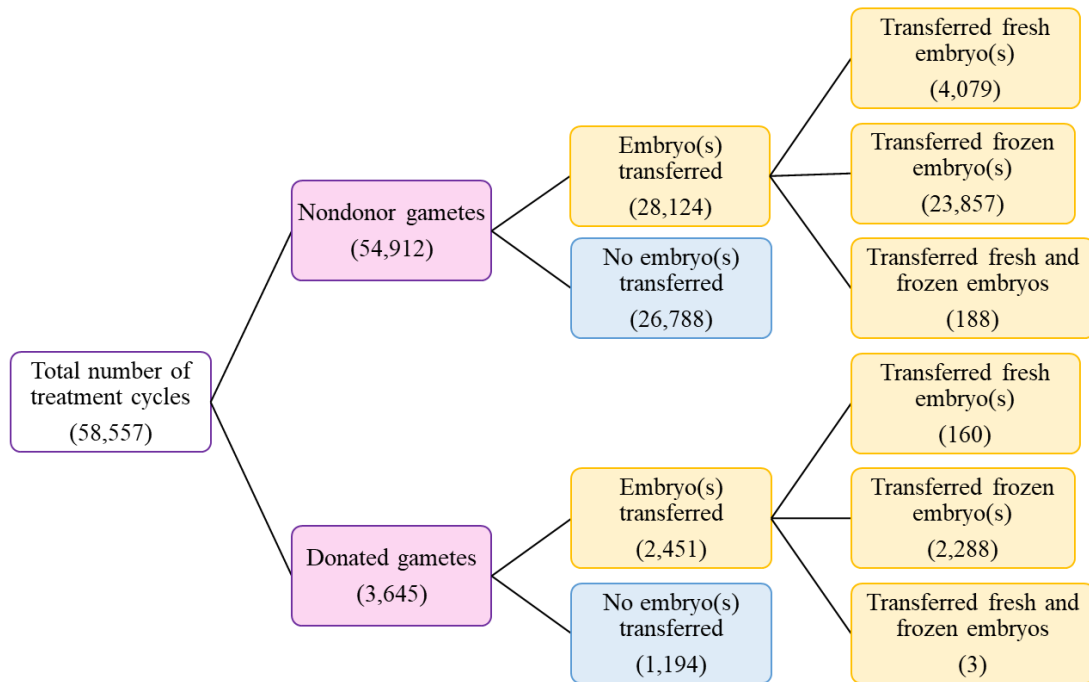
- (1) The annual backup data files used in this analysis report were exported from the “Assisted Reproduction Online Reporting and Subsidy Application System” database. Considering that approximately 10 months elapse between treatment and delivery, along with additional administrative processing time, institutions need sufficient time for reporting and follow-up. Accordingly, this report analyzed ART data from two years prior to the publication year. For example, the 2025 annual report analyzes ART cycles initiated between January 1 and December 31, 2023.
- (2) Before conducting statistical analyses and compiling tables, the data were checked for accuracy and logical consistency, errors were corrected, and the exported files were verified against data retrieved from the online reporting system.
- (3) After completing the above verification, assisted reproduction institutions were requested to help clarify medical record documentation and correct reporting data when discrepancies requiring clarification were identified.
- (4) Based on the corrected information, revised annual ART reporting data files were re-exported for analyses.

2. Potential Sources of Data Result Variations

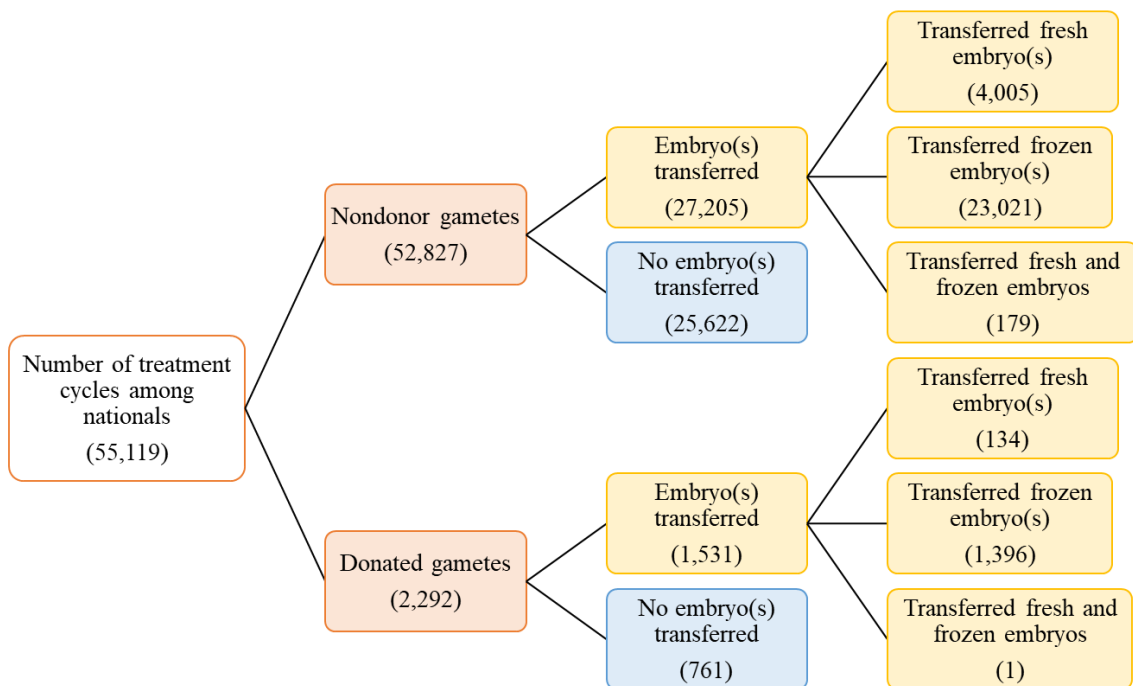
- (1) Data within the assisted reproduction reporting system may be corrected based on post-event findings or review results. Therefore, annual statistical values may vary slightly depending on the timing of data extraction. This report uses the most up-to-date dataset available prior to its production and table compilation.
- (2) In some cases, women undergoing ART may decline or be unavailable for follow-up, for example, if they deliver in another country. As a result, reported pregnancy outcomes may differ slightly from actual outcomes.

3. Number of treatment cycles included in the analyses

(1) Total number of treatment cycles



(2) Number of treatment cycles among nationals



Appendix 2: Summary of Assisted Reproduction Statistics in 2023

Profile

Assisted Reproduction Method		Procedural Factors		Causes of Infertility (%)	
IVF/ET	100%	Use ICSI	30%	Fallopian tube factor	
6%				Ovarian factor	
ZIFT/ TET	< 1%			Endometriosis	2%
34%				Other uterine factors	4%
AID	< 1%			Other female factors	5%
Other	< 1%			Male factor	8%
				Multiple factors	
				Unknown reason	
	36%				
	5%				

Pregnancy success rates

Type of Cycle	Recipient Women age				
	<35	35-37	38-40	>40	Total
Fresh embryo of ART Cycles					
Number of treatment cycles	6,497	5,629	7,560	12,226	31,912
Percentage of pregnancy cycles	4.4	5.3	4.9	2.6	4.0
Percentage of live birth cycles	3.3	3.6	3.5	1.5	2.7
Number of Transfer Cycles	722	815	1,122	1,771	4,430
Pregnancy rate of transfer cycles	39.9	36.7	33.3	18.2	29.0
Live birth rate of transfer cycles	29.4	25.0	23.4	10.3	19.5
Singleton live birth rate of transfer cycles	27.0	20.6	19.7	8.5	16.6
Percentage of cancellations	90.0	86.4	86.3	87.1	87.4
Average number of embryos transferred	1.2	1.6	1.8	1.9	1.7
Percentage of multiple births in live birth cycles	8.0	17.6	16.0	17.5	14.7

Frozen embryo of ART

Cycles	<35	35-37	38-40	>40	Total
Number of treatment cycles	7,207	5,784	6,098	7,556	26,645
Percentage of pregnancy cycles	54.2	53.5	46.4	33.2	46.3
Percentage of live birth cycles	43.9	42.3	34.5	21.6	35.1
Number of Transfer Cycles	7,082	5,695	5,971	7,397	26,145
Pregnancy rate of transfer cycles	55.2	54.3	47.4	34.0	47.2
Live birth rate of transfer cycles	44.7	42.9	35.3	22.1	35.8
Singleton live birth rate of transfer cycles	39.6	36.0	29.9	19.0	30.8
Percentage of cancellations	1.7	1.5	2.1	2.1	1.9
Average number of embryos transferred	1.3	1.5	1.7	1.9	1.6
Percentage of multiple births in live birth cycles	11.4	16.2	15.1	14.1	14.0

Appendix 2: Summary of Assisted Reproduction Statistics in 2023

Fresh embryos from nondonor eggs

	<35	35-37	38-40	>40	Total
Number of treatment cycles	6,429	5,572	7,457	11,309	30,767
Percentage of pregnancy cycles	4.4	5.3	4.9	2.2	3.9
Percentage of live birth cycles	3.2	3.6	3.4	1.1	2.6
Number of Transfer Cycles	716	810	1,106	1,669	4,301
Pregnancy rate of transfer cycles	39.5	36.3	32.9	14.7	27.6
Live birth rate of transfer cycles	29.1	24.8	23.2	7.2	18.3
Singleton live birth rate of transfer cycles	26.7	20.5	19.6	6.7	15.9
Percentage of cancellations	89.9	86.3	86.2	86.4	87.1
Average number of embryos transferred	1.1	1.6	1.8	1.9	1.7
Percentage of multiple births in live birth cycles	8.2	17.4	15.6	7.5	12.8

Frozen embryos from nondonor eggs

	<35	35-37	38-40	>40	Total
Number of treatment cycles	7,063	5,658	5,917	5,893	24,531
Percentage of pregnancy cycles	54.3	53.2	46.1	27.7	45.7
Percentage of live birth cycles	44.1	42.2	34.5	16.8	34.8
Number of Transfer Cycles	6,941	5,571	5,793	5,756	24,061
Pregnancy rate of transfer cycles	55.3	54.1	47.1	28.4	46.6
Live birth rate of transfer cycles	44.8	42.8	35.2	17.2	35.4
Singleton live birth rate of transfer cycles	39.8	36.0	30.0	15.3	30.7
Percentage of cancellations	1.7	1.5	2.1	2.3	2.0
Average number of embryos transferred	1.3	1.5	1.7	1.9	1.6
Percentage of multiple births in live birth cycles	11.2	15.9	14.8	11.2	13.4

Fresh embryos from nondonor sperm

	<35	35-37	38-40	>40	Total
Number of treatment cycles	6,433	5,599	7,525	12,177	31,734
Percentage of pregnancy cycles	4.4	5.3	4.9	2.6	4.0
Percentage of live birth cycles	3.2	3.6	3.5	1.5	2.7
Number of Transfer Cycles	713	808	1,113	1,762	4,396
Pregnancy rate of transfer cycles	39.7	36.5	33.4	18.2	28.9
Live birth rate of transfer cycles	29.0	24.8	23.5	10.4	19.4
Singleton live birth rate of transfer cycles	26.6	20.4	19.7	8.6	16.5
Percentage of cancellations	90.0	86.4	86.3	87.1	87.4
Average number of embryos transferred	1.2	1.6	1.8	1.9	1.7
Percentage of multiple births in live birth cycles	8.2	17.5	16.1	17.5	14.8

**Frozen embryos from
nondonor sperm**

	<35	35-37	38-40	>40	Total
Number of treatment cycles	7,129	5,734	6,059	7,515	26,437
Percentage of pregnancy cycles	54.1	53.5	46.3	33.3	46.3
Percentage of live birth cycles	43.8	42.2	34.6	21.6	35.0
Number of Transfer Cycles	7,004	5,646	5,934	7,357	25,941
Pregnancy rate of transfer cycles	55.1	54.3	47.3	34.0	47.2
Live birth rate of transfer cycles	44.6	42.9	35.3	22.1	35.7
Singleton live birth rate of transfer cycles	39.5	35.9	30.0	19.0	30.7
Percentage of cancellations	1.8	1.5	2.1	2.1	1.9
Average number of embryos transferred	1.3	1.5	1.7	1.9	1.6
Percentage of multiple births in live birth cycles	11.4	16.2	15.1	14.1	14.0

**Fresh embryos from nondonor
gametes**

	<35	35-37	38-40	>40	Total
Number of treatment cycles	6,365	5,542	7,422	11,260	30,589
Percentage of pregnancy cycles	4.4	5.2	4.9	2.2	3.8
Percentage of live birth cycles	3.2	3.6	3.4	1.1	2.5
Number of Transfer Cycles	707	803	1,097	1,660	4,267
Pregnancy rate of transfer cycles	39.3	36.1	33.0	14.7	27.5
Live birth rate of transfer cycles	28.7	24.5	23.2	7.2	18.2
Singleton live birth rate of transfer cycles	26.3	20.3	19.6	6.7	15.8
Percentage of cancellations	89.9	86.3	86.2	86.3	87.1
Average number of embryos transferred	1.1	1.6	1.8	1.9	1.7
Percentage of multiple births in live birth cycles	8.4	17.3	15.7	7.5	12.9

**Frozen embryos from
nondonor gametes**

	<35	35-37	38-40	>40	Total
Number of treatment cycles	6,985	5,608	5,878	5,852	24,323
Percentage of pregnancy cycles	54.2	53.2	46.1	27.7	45.7
Percentage of live birth cycles	44.0	42.1	34.5	16.8	34.7
Number of Transfer Cycles	6,863	5,522	5,756	5,716	23,857
Pregnancy rate of transfer cycles	55.2	54.1	47.1	28.4	46.6
Live birth rate of transfer cycles	44.7	42.8	35.3	17.2	35.4
Singleton live birth rate of transfer cycles	39.7	35.9	30.0	15.3	30.7
Percentage of cancellations	1.7	1.5	2.1	2.3	1.9
Average number of embryos transferred	1.3	1.5	1.7	1.9	1.6
Percentage of multiple births in live birth cycles	11.2	15.9	14.8	11.2	13.4

Appendix 2: Summary of Assisted Reproduction Statistics in 2023

	Total for all ages	
Donor eggs	Fresh embryos	Frozen embryos
Number of Transfer Cycles	129	2,084
Live birth rate of transfer cycles	58.9	39.3
Average number of embryos transferred	1.8	1.6
Donor sperm	Fresh embryos	Frozen embryos
Number of Transfer Cycles	34	204
Live birth rate of transfer cycles	32.4	41.2
Average number of embryos transferred	1.9	1.6
Embryos from nondonor gametes	Fresh embryos	Frozen embryos
Number of Transfer Cycles	4,267	23,857
Live birth rate of transfer cycles	18.2	35.4
Average number of embryos transferred	1.7	1.6

Number of embryos transferred and singleton live birth percentage

<35 age group	Number of transferred embryos			
	1	2	3	4
Number of Transfer Cycles	6,076	1,485	171	72
Pregnancy rate of transfer cycle	52.2	60.3	55.0	48.6
Singleton with fetal heart sound in all pregnancies	93.4	58.2	55.0	50.0
Singleton percentage in all live birth	98.2	61.1	56.4	53.6

35-37 age group	Number of transferred embryos			
	1	2	3	4
Number of Transfer Cycles	3,284	3,048	115	63
Pregnancy rate of transfer cycle	50.5	53.6	54.8	61.9
Singleton with fetal heart sound in all pregnancies	91.0	65.0	64.7	51.4
Singleton percentage in all live birth	98.4	69.6	71.7	63.3

38-40 age group	Number of transferred embryos			
	1	2	3	4
Number of Transfer Cycles	2,520	4,286	175	111
Pregnancy rate of transfer cycle	45.8	44.6	46.3	49.6
Singleton with fetal heart sound in all pregnancies	91.8	67.9	60.0	65.9
Singleton percentage in all live birth	98.9	76.4	69.6	73.0

>40 age group	Number of transferred embryos			
	1	2	3	4
Number of Transfer Cycles	2,733	5,343	559	532
Pregnancy rate of transfer cycle	34.9	30.2	23.1	25.4
Singleton with fetal heart sound in all pregnancies	87.4	61.5	59.1	59.6
Singleton percentage in all live birth	99.6	76.7	73.3	80.5

Number of reporting ART institutes: 101

Appendix 3: Statistical Data on Individual ART Institutes in 2023

County/ City	Name of Institution	Treatment Cycles	Assisted Reproduction Methods (%)			Causes of Infertility (%)							
			IVF	ICSI (IVF+ICSI)	Other	Multiple factors	Ovarian factors	Fallopian tube factor	Endometriosis	Other uterine factors	Other female factors	Male factor	Unknown reason
Keelung City	Jian-An Fertility Center	286	74.8	25.2	0.0	19.6	48.3	11.5	4.6	0.4	1.4	7.7	6.6
	Keelung Gene Infertility Medical Center	20	100.0	0.0	0.0	60.0	10.0	0.0	0.0	0.0	0.0	0.0	30.0
Taipei City	National Taiwan University Hospital	1,176	65.5	34.5	0.0	57.8	11.1	5.3	1.0	0.3	14.2	5.5	4.8
	Taipei Chang Gung Memorial Hospital, Chang Gung Medical Foundation	643	56.6	43.4	0.0	47.1	49.9	0.6	0.0	0.5	0.8	0.8	0.3
	Taipei Veterans General Hospital	530	78.3	21.7	0.0	16.6	25.5	6.4	2.3	0.8	0.4	39.1	9.1
	Tri-Service General Hospital	132	62.1	37.9	0.0	49.2	25.8	6.8	0.0	3.0	6.1	6.1	3.0
	MacKay Memorial Hospital	697	61.6	38.5	0.0	44.3	13.9	6.2	3.2	1.3	0.3	25.4	5.5
	Cathy General Hospital	368	93.2	6.8	0.0	23.1	53.5	12.0	1.9	2.7	1.6	5.2	0.0
	Chung Shan Hospital	234	77.8	22.2	0.0	9.8	63.3	9.8	0.4	2.1	0.9	11.1	2.6
	Shin Kong Wu Ho-Su Memorial Hospital	895	48.9	51.1	0.0	1.3	61.9	15.1	0.9	0.3	0.0	13.0	7.5
	Taiwan Adventist Hospital	163	76.7	23.3	0.0	58.3	20.9	0.0	0.0	1.8	0.0	16.0	3.1
	Taipei Medical University Hospital	764	81.2	18.9	0.0	4.1	66.8	5.9	3.9	3.4	4.2	9.7	2.1
	Pan's Ladies Clinic & Infertility Center	76	84.2	15.8	0.0	21.1	47.4	9.2	2.6	10.5	0.0	9.2	0.0
	Honji Fertility Center	219	23.7	76.3	0.0	35.2	47.0	2.3	1.4	1.4	2.7	6.9	3.2
	Hope Fertility & PGD Center	371	75.2	24.8	0.0	24.5	67.1	0.0	0.3	1.9	1.4	3.2	1.6
	IHMED Reproductive Med Center	1,671	76.4	23.3	0.2	29.4	42.9	6.0	1.7	3.5	9.0	7.0	0.4
	Huang, Jian-Rong Obstetrics and Gynecology Clinic	1,392	52.4	47.4	0.2	47.6	27.8	6.0	1.1	3.2	0.0	6.3	8.1

Appendix 3: Statistical Data on Individual ART Institutions in 2023

County/ City	Name of Institution	Treatment Cycles	Assisted Reproduction Methods (%)			Causes of Infertility (%)							
			IVF	ICSI (IVF+ICSI)	Other	Multiple factors	Ovarian factors	Fallopian tube factor	Endometriosis	Other uterine factors	Other female factors	Male factor	Unknown reason
Taipei City	Dr. Wang Reproductive Fertility Center	2,618	55.6	44.4	0.0	53.8	9.0	3.1	1.1	24.3	0.1	8.6	0.0
	Taipei Branch of Gene Infertility Medical Center	359	83.0	17.0	0.0	48.2	25.6	3.1	0.6	0.6	3.3	5.6	13.1
	Renai Branch of Taipei City Hospitals	187	80.8	19.3	0.0	26.2	48.1	7.0	2.7	0.0	5.9	7.5	2.7
	HuaYu Fertility Center	861	86.0	14.1	0.0	2.2	28.7	6.9	12.1	7.4	0.7	11.4	30.7
	Stork 11 Fertility Center Taipei	1,949	65.4	34.6	0.0	74.3	14.6	2.2	0.0	3.1	0.8	2.5	2.6
	Usoon Fertility Center	1,589	71.0	29.0	0.0	1.9	49.8	8.2	4.0	1.5	6.5	10.1	18.0
	Taipei Fertility Center	3,602	74.4	25.6	0.0	32.4	13.6	7.2	5.5	2.7	30.8	5.2	2.8
	Becoming Reproductive Center	522	86.6	13.4	0.0	67.8	12.8	1.9	1.2	0.2	11.7	3.5	1.0
	Dr .Young Person Obstetrics and Gynecology Clinic	139	53.2	46.8	0.0	0.0	98.6	0.0	0.7	0.0	0.0	0.7	0.0
	Nuwa Fertility Center	1,749	80.5	19.5	0.0	14.5	72.3	2.6	1.3	1.7	2.8	3.1	1.8
	W BestIVF Fertility Center	231	51.5	48.5	0.0	57.1	6.1	3.0	0.9	15.2	0.0	17.8	0.0
New Taipei City	Far Eastern Memorial Hospital	252	42.9	57.1	0.0	48.4	38.9	3.6	0.8	0.4	0.0	6.8	1.2
	Art Baby	182	69.8	30.2	0.0	32.4	48.4	1.7	1.7	0.0	0.0	6.0	9.9
	Taipei Medical University-Shuang Ho Hospital, Ministry of Health and Welfare	108	75.0	25.0	0.0	7.4	45.4	21.3	11.1	0.9	0.0	12.0	1.9
	Taipei Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation	122	54.1	45.9	0.0	34.4	26.2	9.8	0.0	0.0	2.5	13.1	13.9
	Star International Fertility Center	147	72.8	27.2	0.0	40.8	46.9	1.4	0.0	0.7	3.4	6.8	0.0
	Banqiao Branch of Gene Infertility Medical Center	441	68.9	31.1	0.0	46.9	37.4	2.0	1.4	2.3	0.5	3.0	6.6
Taoyuan City	Linkou Chang Gung Memorial Hospital, Chang Gung Medical Foundation	1,485	60.5	39.5	0.0	59.5	34.8	3.0	0.3	0.5	0.2	1.6	0.1
	Tao Yuan General Hospital, Ministry of Health and Welfare	63	90.5	9.5	0.0	50.8	30.2	6.4	0.0	4.8	1.6	6.4	0.0

Appendix 3: Statistical Data on Individual ART Institutions in 2023

County/ City	Name of Institution	Treatment Cycles	Assisted Reproduction Methods (%)			Multiple factors	Causes of Infertility (%)						
			IVF	ICSI (IVF+ICSI)	Other		Ovarian factors	Fallopian tube factor	Endometriosis	Other uterine factors	Other female factors	Male factor	Unknown reason
Taoyuan City	Min-Sheng General Hospital	65	63.1	36.9	0.0	20.0	27.7	21.5	1.5	3.1	0.0	12.3	13.9
	Hungchi Women & Children's Hospital	960	53.8	46.3	0.0	19.0	29.4	29.7	1.8	4.5	3.2	6.6	5.9
	Hueish Sheng Obstetrics Clinic	175	64.0	36.0	0.0	33.7	13.1	8.0	0.6	13.1	0.0	29.7	1.7
	FM IVF Center	434	70.5	29.5	0.0	12.4	17.1	10.8	5.3	3.0	5.8	7.8	37.8
	Nuwa Fertility Center Taoyuan	774	70.4	29.6	0.0	25.7	39.0	6.6	7.9	4.9	3.1	6.3	6.5
	Hung Chi Gene IVF Center	342	65.2	34.8	0.0	14.6	42.4	16.1	1.8	5.3	1.5	8.8	9.7
	Binkun Women's Children's Hospital	110	90.0	10.0	0.0	12.7	43.6	15.5	0.0	0.0	0.0	11.8	16.4
Hsinchu City	Jiang's OBS & GYN Clinic	43	60.5	39.5	0.0	4.7	34.9	7.0	7.0	2.3	0.0	44.2	0.0
	Stork Fertility Center	2,282	63.2	36.8	0.0	31.1	48.9	1.6	0.5	0.8	0.0	7.1	10.0
	Cheng-Kai Lin Babymake Clinic	226	80.1	19.9	0.0	95.6	4.0	0.0	0.4	0.0	0.0	0.0	0.0
	Hsinchu MacKay Memorial Hospital	532	54.9	45.1	0.0	60.2	14.3	3.6	2.6	5.6	0.4	12.0	1.3
Hsinchu County	Taiwan IVF Group	1,200	62.6	37.4	0.0	83.2	4.5	0.2	0.4	5.1	2.0	4.2	0.5
	China Medical University Hsinchu Hospital	122	70.5	29.5	0.0	56.6	13.9	8.2	0.0	0.0	0.0	17.2	4.1
	NTU Hsin-Chu Hospital	83	57.8	42.2	0.0	7.2	22.9	20.5	4.8	1.2	0.0	18.1	25.3
Miaoli County	Da-Chien Health Medical System	63	82.5	17.5	0.0	4.8	47.6	23.8	11.1	3.2	0.0	6.4	3.2
Taichung City	China Medical University Hospital	335	60.3	39.7	0.0	46.3	27.2	4.5	2.7	0.6	2.1	8.1	8.7
	Chung Shan Medical University Hospital	351	77.5	22.5	0.0	98.0	0.3	0.9	0.0	0.3	0.0	0.3	0.3
	Lee Women's Hospital	5,220	69.2	30.8	0.0	55.2	28.0	2.0	0.1	1.4	5.8	5.2	2.4
	Taichung Veterans General Hospital	752	85.0	15.0	0.0	20.4	28.7	16.9	8.4	8.1	3.2	8.4	6.0
	Cheng Ching Hospital Chung Kang Branch	8	100.0	0.0	0.0	0.0	50.0	12.5	0.0	12.5	0.0	25.0	0.0

Appendix 3: Statistical Data on Individual ART Institutions in 2023

County/ City	Name of Institution	Treatment Cycles	Assisted Reproduction Methods (%)			Causes of Infertility (%)							
			IVF	ICSI (IVF+ICSI)	Other	Multiple factors	Ovarian factors	Fallopian tube factor	Endometriosis	Other uterine factors	Other female factors	Male factor	Unknown reason
Taichung City	Lin Shin Hospital	163	58.3	41.7	0.0	46.0	9.8	22.1	6.1	2.5	0.0	10.4	3.1
	Liu, Zhong-Jun Women and Children Clinic	333	61.3	38.4	0.3	30.0	14.1	3.9	7.8	14.7	0.9	5.4	23.1
	Mei Tsun Women and Children Clinic	67	50.8	49.3	0.0	31.3	31.3	10.5	0.0	16.4	0.0	9.0	1.5
	Hsieh, Yao-Yuan Women and Children's Clinic	10	10.0	90.0	0.0	0.0	70.0	0.0	0.0	0.0	0.0	30.0	0.0
	Dashin Women and Children's Clinic	860	79.3	20.2	0.5	16.4	71.3	5.2	2.6	0.9	0.5	3.1	0.0
	Taichung Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation	59	71.2	28.8	0.0	22.0	18.6	17.0	17.0	8.5	0.0	11.9	5.1
	Chang's Fertility Center	528	65.3	34.7	0.0	74.2	10.2	1.9	1.1	7.0	0.6	4.2	0.8
	LOVE IVF Fertility Center	423	86.3	13.7	0.0	25.1	67.9	2.1	0.2	0.0	0.5	4.3	0.0
	Nuwa Fertility Center Taichung	836	51.9	48.1	0.0	4.4	65.8	8.1	1.9	7.9	0.4	4.8	6.7
	Tungs' Taichung MetroHarbor Hospital	62	66.1	33.9	0.0	90.3	1.6	3.2	0.0	1.6	0.0	3.2	0.0
Changhua County	Changhua Christian Hospital	1,417	63.4	36.6	0.0	28.6	40.2	5.4	3.7	1.1	9.8	7.6	3.6
	Dr. Tsai & Dr. Chen's Women Clinic	450	67.1	32.9	0.0	34.7	34.9	10.4	3.3	7.3	1.1	6.9	1.3
	Chang Bing Show Chwan Memorial Hospital	110	89.1	10.9	0.0	3.6	60.9	10.0	2.7	3.6	0.0	16.4	2.7
	Happy Fertility Center	266	50.4	49.6	0.0	5.3	69.2	7.1	8.3	0.8	0.0	9.0	0.4
Yunlin county	National Taiwan University Hospital Yunlin Branch	131	63.4	36.6	0.0	82.4	0.0	5.3	0.8	0.0	1.5	6.9	3.1
Chiayi City	Ditmanson Medical Foundation Chia-Yi Christian Hospital	61	63.9	36.1	0.0	16.4	29.5	6.6	1.6	8.2	0.0	27.9	9.8
	Jie-An Mother & Children Clinic	385	61.6	38.4	0.0	2.9	55.8	11.7	0.8	2.1	1.8	17.4	7.5

Appendix 3: Statistical Data on Individual ART Institutions in 2023

County/ City	Name of Institution	Treatment Cycles	Assisted Reproduction Methods (%)			Causes of Infertility (%)							
			IVF	ICSI (IVF+ICSI)	Other	Multiple factors	Ovarian factors	Fallopian tube factor	Endometriosis	Other uterine factors	Other female factors	Male factor	Unknown reason
Chiayi County	Chiayi Chang Gung Memorial Hospital, Chang Gung Medical Foundation	306	88.6	11.4	0.0	10.8	10.8	13.4	1.3	5.9	0.7	2.3	54.9
Tainan City	National Cheng Kung University Hospital	719	87.6	12.4	0.0	71.9	6.7	1.3	4.7	1.1	5.3	6.5	2.5
	Kuo General Hospital	128	58.6	41.4	0.0	46.1	35.2	7.8	0.0	1.6	1.6	7.8	0.0
	Tube Infertility Clinic. Taiwan IVF Center	99	71.7	28.3	0.0	21.2	40.4	5.1	8.1	1.0	5.1	17.2	2.0
	Sin-Lau Medical Foundation, the Presbyterian church in Taiwan	190	94.7	5.3	0.0	76.8	7.4	10.0	0.5	1.6	0.0	3.7	0.0
	An-An Women and Children Clinic	1,061	91.3	8.6	0.1	5.1	48.0	10.5	0.4	10.2	1.9	19.6	4.4
	DA-AN Women and Children Hospital	239	82.0	18.0	0.0	42.3	31.4	4.6	5.9	2.1	1.7	4.2	8.0
	An-An IVF Center	368	88.0	12.0	0.0	10.9	48.4	11.1	0.3	5.2	0.0	17.7	6.5
	Chi Mei Medical Center	676	95.6	4.4	0.0	60.7	8.6	1.8	1.6	0.0	1.3	26.0	0.0
	Jin -Sin Women and Children's Hospital	1,180	89.0	10.9	0.2	5.3	72.3	9.7	0.1	1.7	0.0	9.2	1.8
Kaohsiung City	Kaohsiung Medical University Chung-Ho Memorial Hospital	355	62.8	37.2	0.0	27.9	46.2	8.2	4.5	5.1	2.5	3.9	1.7
	Chien Shin Hospital	838	53.5	46.5	0.0	22.4	52.2	4.7	6.3	1.4	0.4	11.7	1.0
	Yuan's General Hospital	227	86.8	13.2	0.0	7.5	70.0	7.5	4.4	0.4	0.9	3.1	6.2
	Kaohsiung Veterans General Hospital	1,198	59.8	40.2	0.0	58.7	8.0	1.5	5.4	0.0	10.9	2.5	13.0
	Jung-Chou Chang Women and Children Clinic	62	25.8	74.2	0.0	0.0	77.4	0.0	3.2	8.1	0.0	11.3	0.0
	Felicity Clinic	396	90.4	9.1	0.5	31.3	58.1	3.8	0.5	2.5	0.3	3.5	0.0
	Makebaby Reproductive Center	751	61.5	38.5	0.0	8.7	51.4	9.2	1.2	6.1	1.2	17.6	4.7

County/ City	Name of Institution	Treatment Cycles	Assisted Reproduction Methods (%)			Causes of Infertility (%)							
			IVF	ICSI (IVF+ICSI)	Other	Multiple factors	Ovarian factors	Fallopian tube factor	Endometriosis	Other uterine factors	Other female factors	Male factor	Unknown reason
Kaohsiung City	E-Da Dachang Hospital, E-Da Healthcare Group	129	72.9	27.1	0.0	0.0	84.5	1.6	7.0	0.0	0.0	7.0	0.0
	Art Baby Women and Children's Clinic	646	91.2	8.8	0.0	9.1	46.0	7.0	6.0	9.9	0.6	6.5	14.9
	An Ten Obstetrics and Gynecology	148	62.8	37.2	0.0	95.3	4.1	0.0	0.0	0.0	0.0	0.7	0.0
	Kaohsiung Chang Gung Memorial Hospital, Chang Gung Medical Foundation	808	92.7	7.3	0.0	20.3	43.9	5.2	5.2	1.9	1.7	7.9	13.9
	E-Da Hospital, E-Da Healthcare Group	215	61.9	38.1	0.0	97.2	1.4	0.5	0.0	0.5	0.0	0.5	0.0
	Professor Chang Fertility Clinic	920	72.8	27.2	0.0	37.6	40.7	2.9	2.8	2.1	0.2	5.5	8.2
	Jung-An Maternal & Pediatric Hospital	28	71.4	28.6	0.0	57.1	25.0	0.0	0.0	7.1	0.0	0.0	10.7
Pingtung County	Pingtung Christian Hospital	194	87.6	12.4	0.0	24.7	37.1	17.0	2.6	4.1	0.0	4.6	9.8
Hualien County	Hualien Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation	57	80.7	19.3	0.0	14.0	3.5	8.8	0.0	0.0	12.3	56.1	5.3
Kinmen County	Kinmen Hospital, Ministry of Health and Welfare	89	98.9	1.1	0.0	0.0	65.2	1.1	0.0	32.6	0.0	1.1	0.0
	Dr. Wei Kinmen Reproductive Medicine Clinic	49	26.5	73.5	0.0	0.0	49.0	14.3	6.1	14.3	0.0	12.2	4.1

Reference Websites

1. Health Promotion Administration, Ministry of Health and Welfare : <http://www.hpa.gov.tw/>
2. Taiwanese Society for Reproductive Medicine : <http://www.tsrn.org.tw/>
3. Fertility Society, ROC : <http://www.fs.org.tw>
4. American Society for Reproductive Medicine : <http://www.asrm.org/>
5. Centers for Disease Control and Prevention : <http://www.cdc.gov/>

