Figures from the 2016 Assisted Reproductive Technology National Summary Report
Locations of ART Clinics in the United States and Puerto Rico, 2016

Number of ART clinics in the United States in 2016: 502
Number of ART clinics that submitted data in 2016: 463
Total number of ART cycles started in 2016 at clinics reporting data: 263,577*
Number of live-birth deliveries resulting from all ART cycles started in 2016: 65,996
Number of infants born as a result of all ART cycles started in 2016: 76,930

*Total includes 65,840 cycles with the intent to freeze all eggs or embryos and 934 cycles with the intent to fertilize previously frozen nondonor eggs and transfer resulting embryos. This does not include 2 cycles evaluating a new treatment procedure.
Types of ART Cycles—United States,* 2016

- Frozen embryo from nondonor egg 32.7% (86,266 cycles)
- Egg or embryo banking 25.0% (65,840 cycles)
- Fresh embryo from fresh nondonor egg 32.7% (86,237 cycles)
- Fresh embryo from frozen nondonor egg 0.4% (934 cycles)
- New treatment procedure <0.1% (2 cycles)
- Donated embryo 0.7% (1,869 cycles)
- Frozen donor egg 1.3% (3,329 cycles)
- Frozen donor embryo 5.1% (13,458 cycles)

* Total does not equal 100% due to rounding.
ART Use by Age Group—United States,* 2016

- Age: <35 38.3%
- Age: 35–37 21.5%
- Age: 38–40 19.1%
- Age: 41–42 9.6%
- Age: 43–44 6.0%
- Age: >44 5.5%

* Based on 263,577 cycles.
Types of ART Cycles by Age Group—United States,* 2016

* Percentages of ART cycles that used fresh or frozen embryos from nondonor or donor eggs are in parentheses.
† Total does not equal 100% due to rounding.
Percentages of ART Cycles That Resulted in Live Births, by Type of ART and Clinic Size—United States, 2016

- <116 cycles: Fresh nondonor 24%, Frozen nondonor 39%, Fresh donor 40%, Frozen donor 37%
- 116-214 cycles: Fresh nondonor 24%, Frozen nondonor 39%, Fresh donor 45%, Frozen donor 41%
- 215-511 cycles: Fresh nondonor 23%, Frozen nondonor 39%, Fresh donor 42%, Frozen donor 43%
- >511 cycles: Fresh nondonor 22%, Frozen nondonor 43%, Fresh donor 43%, Frozen donor 42%

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* Cycles using both nondonor and donor frozen eggs are excluded.
Outcomes of ART Cycles Using Fresh Embryos from Fresh Nondonor Eggs, by Stage, 2016

- 86,237 cycles started
- 76,109 retrievals
- 52,686 transfers
- 23,529 pregnancies
- 19,137 live-birth deliveries
Reasons ART Cycles Using Fresh Embryos from Fresh Nondonor Eggs Were Canceled,* 2016

- No or not enough egg production: 81.2%
- Patient withdrawal for other reasons: 12.7%
- Over response to ovarian stimulation medication: 4.0%
- Concurrent illness: 2.1%

* Based on 10,128 ART cycles.

- **Pregnancies**:
  - Cycles: 27.3%
  - Transfers: 44.7%

- **Live births**:
  - Cycles: 22.2%
  - Transfers: 36.3%

- **Single-infant live births**:
  - Cycles: 17.9%
  - Transfers: 29.3%
Outcomes of ART Cycles Using Fresh Embryos from Fresh Nondonor Eggs, 2016

- Clinical pregnancy: 27.3%
- Single-fetus pregnancy: 19.8%
- Multiple-fetus pregnancy: 5.6%
- Ectopic pregnancy: 0.5%
- Not able to determine number of fetuses: 1.9%
- No pregnancy: 72.2%
Outcomes of Pregnancies That Resulted from ART Cycles Using Fresh Embryos from Fresh Nondonor Eggs, 2016

- Single-infant birth: 65.5%
- Multiple-infant birth: 15.8%
- Miscarriage: 16.2%
- Induced abortion: 0.9%
- Stillbirth: 0.6%
- Unknown: 0.9%

* Maternal deaths prior to birth are not displayed due to small number of cycles.
† Total does not equal 100% due to rounding.
Distribution of Multiple-Fetus Pregnancies and Multiple-Infant Live Births Among ART Cycles Using Fresh Embryos from Fresh Nondonor Eggs, 2016

A. 23,529 pregnancies*

- Twins: 19.6%
- Single fetuses: 72.5%
- Triplets or more: 20.7%
- Not able to determine number of fetuses: 1.1%

B. 19,137 live births

- Twins: 18.8%
- Single infants: 80.6%

Total multiple-infant live births: 19.4%

* Total does not equal 100% due to rounding.
Percentages of Preterm Infants or Infants with Low Birth Weight from ART Cycles Using Fresh Embryos from Fresh Nondonor Eggs, by Number of Infants Born, 2016

- Single infants from single-fetus pregnancies: 11.1% preterm, 8.6% low birth weight
- Single infants from multiple-fetus pregnancies: 16.7% preterm, 15.6% low birth weight
- Twins: 57.6% preterm, 54.4% low birth weight
- Triplets or more: 97.2% preterm, 87.8% low birth weight

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Age Distribution of Women Who Had ART Cycles Using Fresh Embryos from Fresh Nondonor Eggs, 2016

* For consistency, all percentages are based on cycles started.

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* For consistency, all percentages are based on cycles started.
Percentages of ART Cycles Using Fresh Embryos from Fresh Nondonor Eggs That Resulted in Miscarriage, by Age of Woman, 2016
Percentages of ART Cycles Using Fresh Embryos from Fresh Nondonor Eggs, by Type of Infertility Diagnosis, * 2016

* Total percentages are greater than 100% because more than one diagnosis can be reported for each cycle.
Percentages of ART Cycles Using Fresh Embryos from Fresh Nondonor Eggs That Resulted in Live Births, by Type of Infertility Diagnosis, 2016
Percentages of ART Cycles Using Fresh Embryos from Fresh Nondonor Eggs That Resulted in Live Births, by Age Group and Number of Previous Live Births, 2016
Percentages of ART Cycles Using Fresh Embryos from Fresh Nondonor Eggs That Resulted in Live Births, by Age Group and History of Miscarriage, Among Women with No Previous Births,* 2016

* Women reporting only previous ectopic pregnancies or pregnancies that ended in induced abortion are not included.
Percentages of ART Cycles Using Fresh Embryos from Fresh Nondonor Eggs That Resulted in Live Births, by Age Group and Number of Previous ART Cycles, Among Women with No Previous Live Births, 2016
Percentages of Fresh Nondonor Retrievals That Used ICSI,* 2016

* Cycles using GIFT are excluded.
Percentages of Fresh Nondonor Retrievals That Resulted in Live Births Among Patients with or Without Diagnosed Male Factor Infertility, by Age Group and Use of ICSI,* 2016

* Cycles using GIFT are excluded.
Numbers of Embryos Transferred Among All Transfers Using Fresh Embryos from Fresh Nondonor Eggs,* 2016

- Two: 48.5%
- One: 39.9%
- Three: 8.6%
- Four: 2.1%
- Five: 0.7%
- Six: 0.2%
- Seven or more: 0.1%
- Unknown: <0.1%

* Total does not equal 100% due to rounding.
Percentages of Embryos Transferred That Implanted Using Fresh Embryos from Fresh Nondonor Eggs, by Age Group, 2016

- <35: 41.8%
- 35–37: 32.6%
- 38–40: 22.0%
- 41–42: 11.7%
- 43–44: 6.2%
- >44: 5.3%

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Percentages of Transfers Using Fresh Embryos from Fresh Nondonor Eggs That Resulted in Live Births of Single, Term, and Normal Birth Weight Infants, by Number of Embryos Transferred, 2016
Percentages of Transfers Using Fresh Embryos from Fresh Nondonor Eggs That Resulted in Live Births and Distribution of Number of Infants Born, by Number of Embryos Transferred,* 2016

* Percentages of transfers resulting in live births are shown on top of each bar graph. Percentages of live births that were single infants, twins, and triplets or more are in parentheses.

† Total does not equal 100% due to rounding.
Percentages of Transfers Using Fresh Embryos from Fresh Nondonor Eggs That Resulted in Live Births and Distribution of Number of Infants Born Among Good-Prognosis Women, by Number of Embryos Transferred, * 2016

* Percentages of transfers resulting in live births are shown on top of each bar graph. Percentages of live births that were single infants, twins, and triplets or more are in parentheses.
† Total does not equal 100% due to rounding.
Day of Embryo Transfer* Among Transfers Using Fresh Embryos from Fresh Nondonor Eggs,†‡ 2016

- Day 5: 61.7%
- Day 3: 29.7%
- Day 4: 1.4%
- Day 2: 3.2%
- Day 1: <0.1%
- Day 6: 4.0%

* Number of days following egg retrieval.
† Cycles using GIFT or ZIFT are excluded. Missing or implausible values for day of embryo transfer (that is, 0 or greater than 6) are not included.
‡ Total does not equal 100% due to rounding.
Percentages of Day 3 and Day 5 Embryo Transfers Using Fresh Embryos from Fresh Nondonor Eggs That Resulted in Live Births, by Age Group,* 2016

* Cycles using GIFT or ZIFT are excluded. Embryo transfers performed on days 1, 2, 4, and 6 are not included because each of these accounted for a small proportion of procedures.
Numbers of Embryos Transferred on Day 3 and Day 5 Among Transfers Using Fresh Embryos from Fresh Nondonor Eggs,* 2016

Day 3
- Four or more: 8.0%
- Three: 17.7%
- One: 24.4%
- Two: 49.9%

Day 5
- Four or more: 0.7%
- Three: 4.6%
- One: 45.8%
- Two: 48.9%

* Cycles using GIFT or ZIFT are excluded. Embryo transfers performed on days 1, 2, 4, and 6 are not included because each of these accounted for a small proportion of procedures.
Distribution of Number of Infants Born Among Day 3 and Day 5 Embryo Transfers Using Fresh Embryos from Fresh Nondonor Eggs That Resulted in Live Births,* 2016

A. 3,615 live births

- Single infants: 81.4%
- Twins: 17.9%
- Triplets or more: 0.7%

B. 13,407 live births

- Single infants: 80.0%
- Twins: 19.4%
- Triplets or more: 2.0%

*Cycles using GIFT or ZIFT are excluded. Embryo transfers performed on days 1, 2, 4, and 6 are not included because each of these accounted for a small proportion of procedures.
Percentages of Day 5 Transfers Using Fresh Embryos from Fresh Nondonor Eggs That Resulted in Live Births and Distribution of Number of Infants Born Among Good-Prognosis Women, by Number of Embryos Transferred,* 2016

* Percentages of transfers resulting in live births are shown on top for each bar graph. Percentages of live births that were single infants, twins, and triplets or more are in parentheses.
† Total does not equal 100% due to rounding.
Percentages of Transfers Using Fresh Embryos from Fresh Nondonor Eggs That Resulted in Live Births Among ART Cycles That Used Gestational Carriers and Those That Did Not, by Age Group, * 2016

* Age groups reflect the age of the ART patient, not the age of the gestational carrier.
Percentages of Embryos Transferred That Implanted Using Frozen Embryos from Nondonor Eggs, by Age Group, 2016

<table>
<thead>
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<th>Age (years)</th>
<th>Percent</th>
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<tr>
<td>&lt;35</td>
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<td>43–44</td>
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<table>
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<th></th>
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<td>Live births</td>
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<tr>
<td>Single-infant live births</td>
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</tbody>
</table>
Distribution of Multiple-Fetus Pregnancies and Multiple-Infant Live Births Among ART Cycles Using Frozen Embryos from Nondonor Eggs, 2016

A. 44,982 pregnancies
- Twins: 14.2%
- Single fetuses: 77.3%
- Not able to determine number of fetuses: 8.0%
- Triplets or more: 0.5%
- Triplets or more: 0.3%

B. 36,682 live births
- Twins: 13.7%
- Single infants: 86.0%
- Total multiple-infant live births: 14.0%
Percentages of Transfers Using Fresh Embryos from Fresh Donor or Fresh Nondonor Eggs That Resulted in Live Births, by Age of Woman, 2016
Distribution of Multiple-Fetus Pregnancies and Multiple-Infant Live Births Among ART Cycles Using Fresh Embryos from Fresh Donor Eggs, 2016

A. 2,888 pregnancies*
- Twins: 23.3%
- Triplets or more: 0.9%
- Not able to determine number of fetuses: 6.3%
- Single fetuses: 69.4%

B. 2,429 live births
- Twins: 23.2%
- Single infants: 76.2%

* Total does not equal 100% due to rounding.

<table>
<thead>
<tr>
<th>Category</th>
<th>Fresh embryo from fresh donor egg</th>
<th>Fresh embryo from frozen donor egg</th>
<th>Frozen donor embryo</th>
<th>Donated embryo</th>
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<td>Single-infant live births</td>
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<td>38</td>
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Numbers of ART Cycles Performed for Banking All Fresh Nondonor Eggs or Embryos, 2007–2016

- Y-axis: Number
- X-axis: Year

- Fresh embryo from fresh donor egg
- Frozen donor embryo
- Donated embryo

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Percentages of Retrievals Using Fresh Embryos from Fresh Donor or Fresh Nondonor Eggs That Used ICSI,* 2007–2016

* Cycles using GIFT are excluded.

![Graph showing percentages of transfers using fresh embryos from fresh nondonor eggs that resulted in single-infant live births by age group from 2007 to 2016.](image_url)
Percentages of Transfers of One, Two, Three, or Four or More Fresh Embryos from Fresh Nondonor Eggs, 2007–2016

* Totals do not equal 100% due to rounding.
Percentages of Elective Single Embryo Transfer (eSET) Among All Transfers Using Fresh Embryos from Fresh Nondonor Eggs, by Age Group,* 2007–2016

* All ages older than 40 years are reported together due to the small number of transfers performed with eSET.
Percentages of Transfers Using Fresh Embryos from Fresh Nondonor Eggs That Resulted in Live Births, by Number of Embryos Transferred, 2007–2016
Percentages of Live Births Using Fresh Embryos from Fresh Nondonor Eggs That Resulted in Multiple Infants Born, by Age Group, 2007–2016

* Totals do not equal 100% due to rounding.