# Cumulative pregnancy (PG) rate per embryo transfer (ET)

- Calculation of cumulative pregnancy rate per embryo transfer (ET) considers cycles where ET is performed (fresh cycles IVF, ICSI, IVF/ICSI, as well as thawing cycles).
- Calculation is performed according to the following rules:
  - 1. **Cycle (fresh or thawing) is ART1, ART2 or ART3**, depending whether it is first, second or third attempt to get pregnant; fourth, fifth or later attempts are not considered.
  - 2. Cycle has **positive outcome** if it ends with clinical pregnancy (PG). Cycle with positive outcome contributes to the final sum of achieved PG with 1:
    - if cycle is ART1 cycle (first attempt), ART1 PG is increased by 1
    - if cycle is ART2 cycle (second attempt), ART2\_PG is increased by 1
    - if cycle is ART3 cycle (third attempt), ART3\_PG is increased by 1.
  - 3. Cycle has **negative outcome** if it does not end with clinical pregnancy (PG). Cycle with negative outcome contributes to the final sum of achieved PG with 0.
  - 4. **After achieving "ongoing" pregnancy** in a certain cycle (no matter whether it is first, second or third attempt), **next cycle with ET** (if exists, and no matter if it is fresh or thawing cycle) **will be considered as next ART1 cycle** first attempt to again get pregnant (to get next child).
    - **Important:** it is not checked whether the child is actually born or not, but only if the PG is "ongoing".
  - 5. If pregnancy in a certain cycle is not achieved at all, or it is interrupted for any reason (not "ongoing" pregnancy), the next cycle with ET (if exists, and no matter if it is fresh or thawing cycle) will be considered as next try to get pregnant: if cycle is ART1 (first attempt), next cycle will be considered as ART2 (second attempt); if cycle is ART2 (second attempt), next cycle will be considered as ART3 (third attempt); if cycle is already ART3 (third attempt), calculation stops (as mentioned, fourth, fifth or later attempts are not considered).
    - ! Important: not only first three cycles of a couple are used for calculation of cumulative PG rate, but all cycles with ET (in certain time-range) which represent first, second or third attempts to get pregnant (one couple can have several ART1, ART2 or ART3, depending on the number of children they have/are willing to have).

Cumulative rates:

$$Rate \ 1 = \frac{ART1\_PG}{ART1\_transfer} \cdot 100\%$$

$$Rate~2 = \frac{ART1\_PG~ + ART2\_PG}{ART1\_transfer} \cdot 100\%$$

Rate 3 = 
$$\frac{ART1\_PG + ART2\_PG + ART3\_PG}{ART1 \text{ transfer}} \cdot 100\%$$

## ART1 – first attempts to get pregnant

- ART1\_transfer total number of ET in all first attempts to get pregnant
- ART1\_PG total number of PG achieved in all first attempts

#### ART2 – second attempts to get pregnant

- ART2\_transfer total number of ET in all second attempts to get pregnant
- ART2\_PG total number of PG achieved in all second attempts

### ART3 – third attempts to get pregnant

- ART3\_transfer total number of ET in all third attempts to get pregnant
- ART3\_PG total number of PG achieved in all third attempts

#### 1. ET performed

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ART1_transfer = 1 (first attempt to get the child)

Not PG

ART1_PG = 0

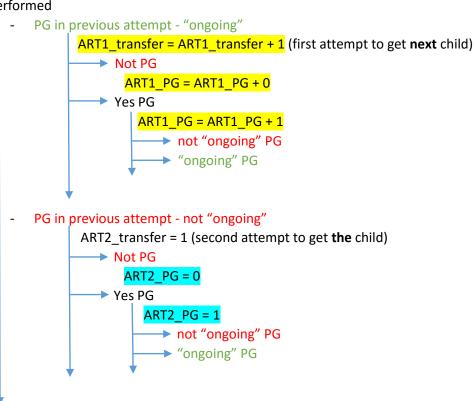
Yes PG

ART1_PG = 1

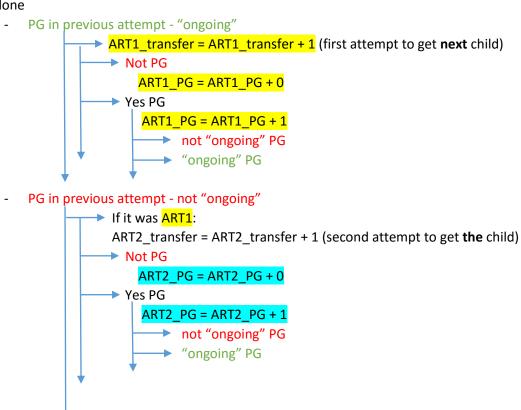
not "ongoing" PG

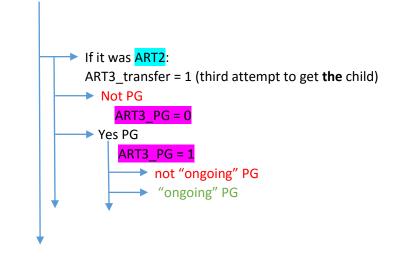
"ongoing" PG
```

#### 2. ET performed



#### 3. ET is done





## 4. ET performed

PG in previous attempt - "ongoing" ART1\_transfer = ART1\_transfer + 1 (first attempt to get next child) ▶ Not PG  $ART1_PG = ART1_PG + 0$ Yes PG  $ART1_PG = ART1_PG + 1$ → not "ongoing" PG → "ongoing" PG PG in previous attempt - not "ongoing" If it was ART2: ART3\_transfer = ART3\_transfer + 1 (third attempt to get **the** child) Not PG  $ART3_PG = ART3_PG + 0$ Yes PG  $ART3_PG = ART3_PG + 1$ → not "ongoing" PG → "ongoing" PG If it was ART3 (third attempt), next attempt is fourth — **STOP**