



Dr Sarah Wakeman

Obstetrician and Gynaecologist

Fertility Associates

Christchurch

Sunday, August 11, 2019

(Plenary)

9:10 - 9:30 The Future of Fertility

Dr Sarah Wakeman
Medical Director Fertility Associates
Christchurch
FRANZCOG, CREI

Fertility Associates – Leaders in Fertility



FERTILITY
associates

a better understanding
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? The future of fertility

Citrix Viewer View Devices FA - MediTEX Live

Women can halt menopause withi Three ways to take a screenshot

mirror.co.uk/news/uk-news/women-can-delay-menopause-up-18825350

Mirror NEWS POLITICS SPORT FOOTBALL CELEBS TV FILM ROYALS MORE

News UK News Fertility

Women can halt menopause with 30-minute op that delays process by 20 years

The operation, which could take as little as 30 minutes, involves removing a piece of one of the ovaries and freezing it to -150C

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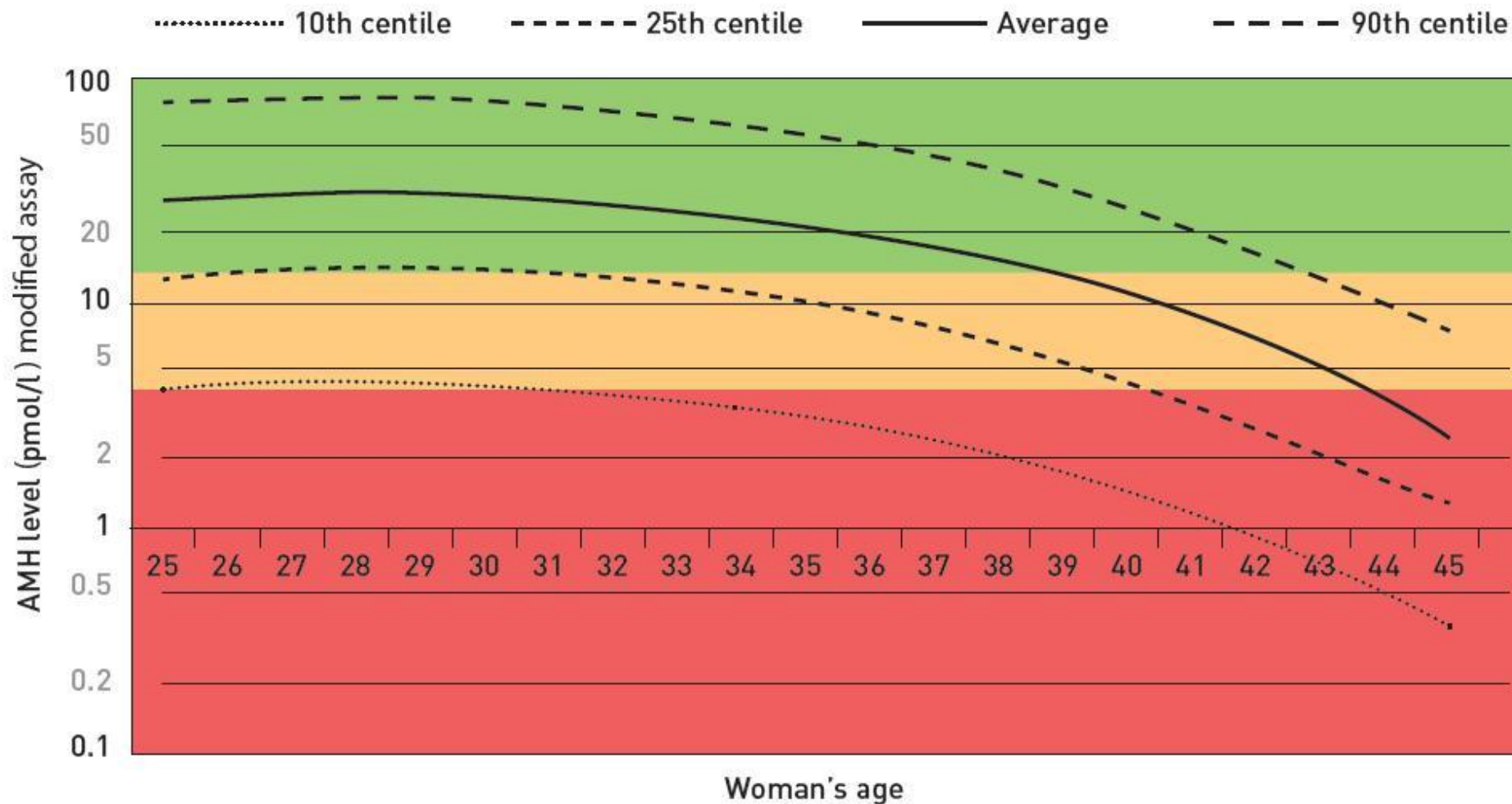
By Keith Parry
00:30, 4 AUG 2019 | UPDATED 08:52, 4 AUG 2019

NEWS

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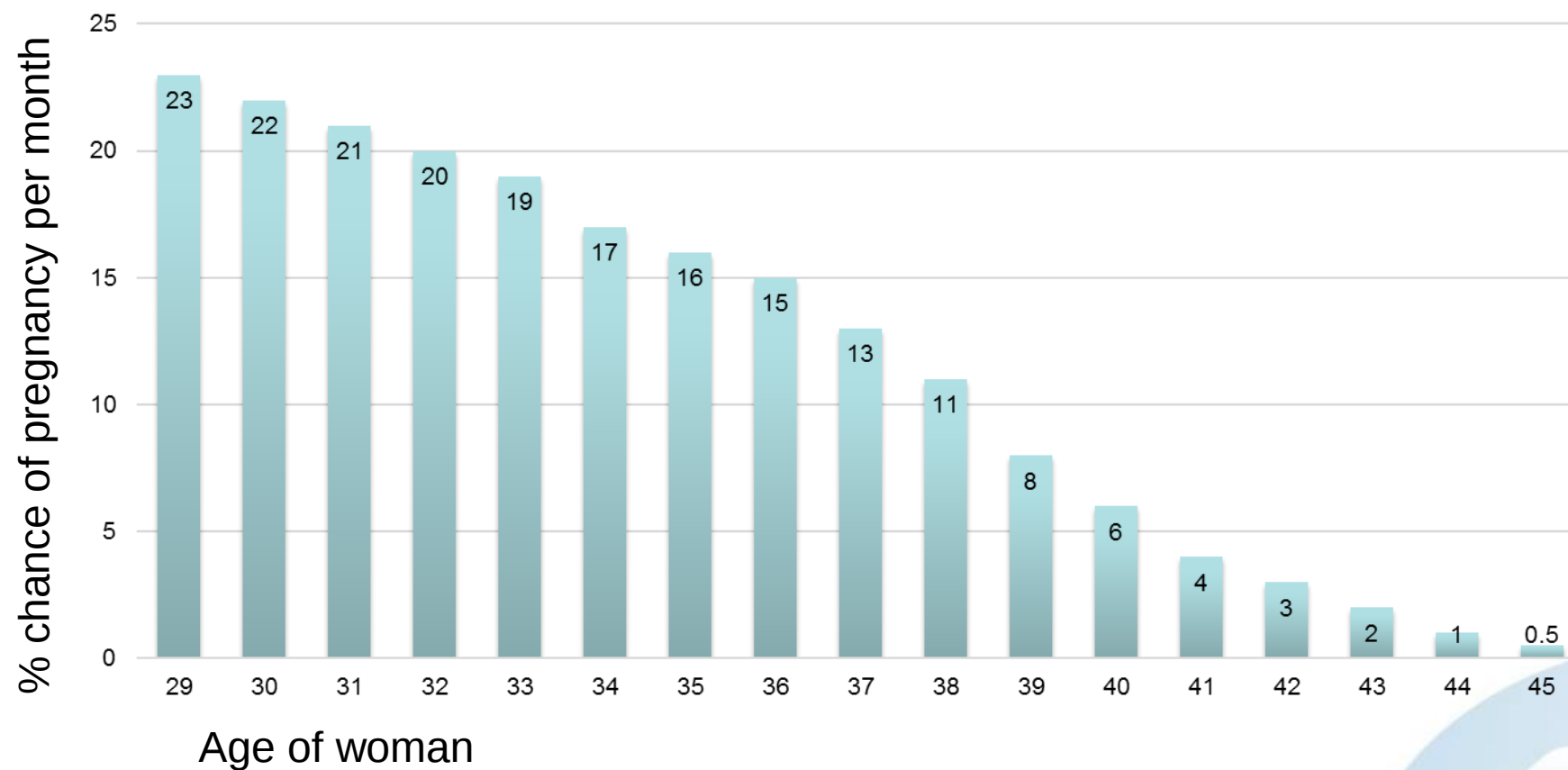
KNobby - The Underwear Club



Green zone	Above the 25th centile for younger, fertile women	Very likely normal ovarian reserve – age is the best predictor of your future fertility	80% chance of 6 or more eggs in IVF
Orange zone	Between the 25th and 10th centiles for younger, fertile women	Some women in this range will have reduced ovarian reserve	50% chance of 6 or more eggs in IVF
Red zone	Below the 10th centile for younger, fertile women	Very likely reduced ovarian reserve	20% chance of 6 or more eggs in IVF



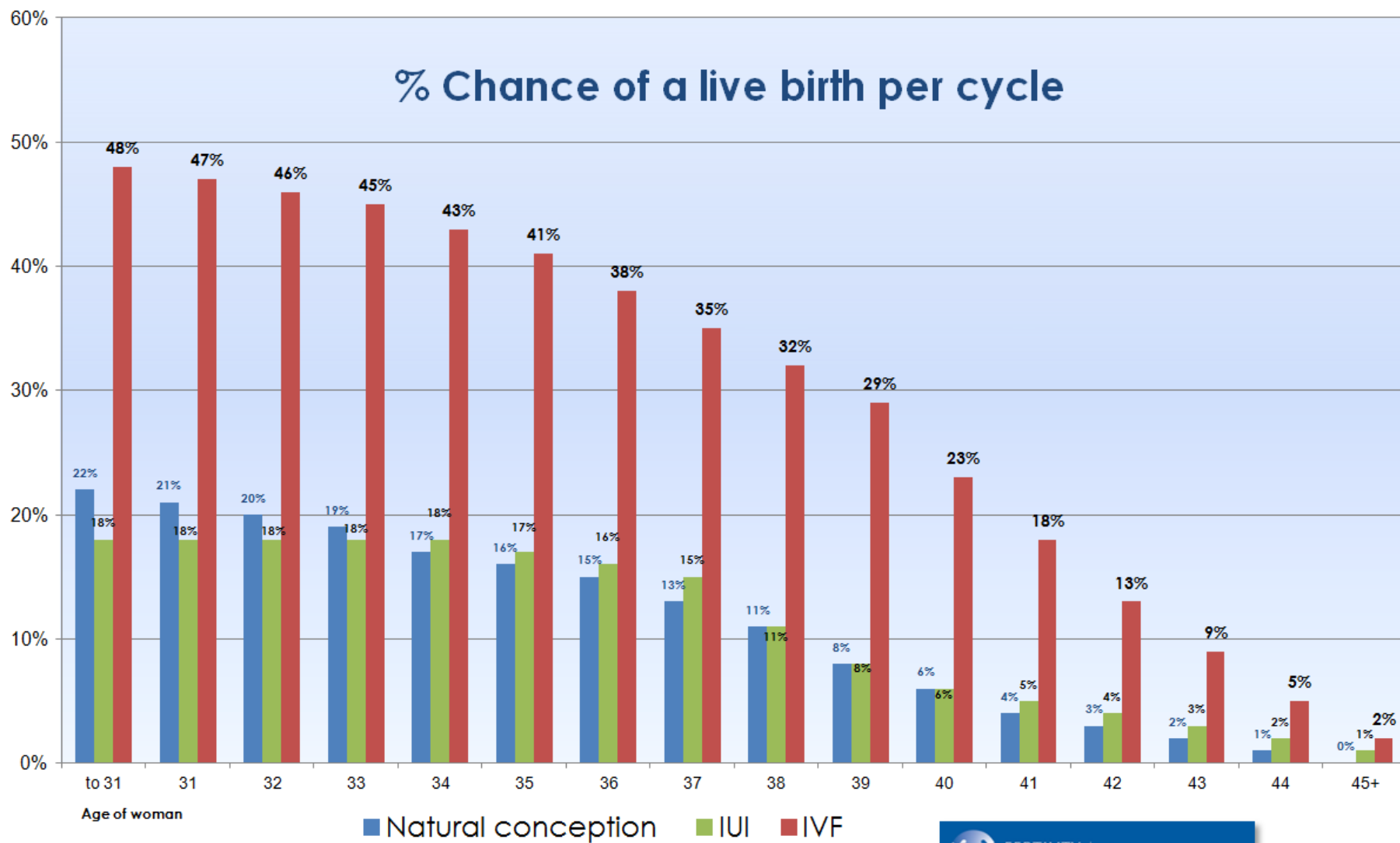
Natural Conception





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Source - Fertility Associates Biological Clock & Pathway to a child data



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NZ research has found infertility is more common than previously thought.

*By the age of 38 years
infertility was experienced by*

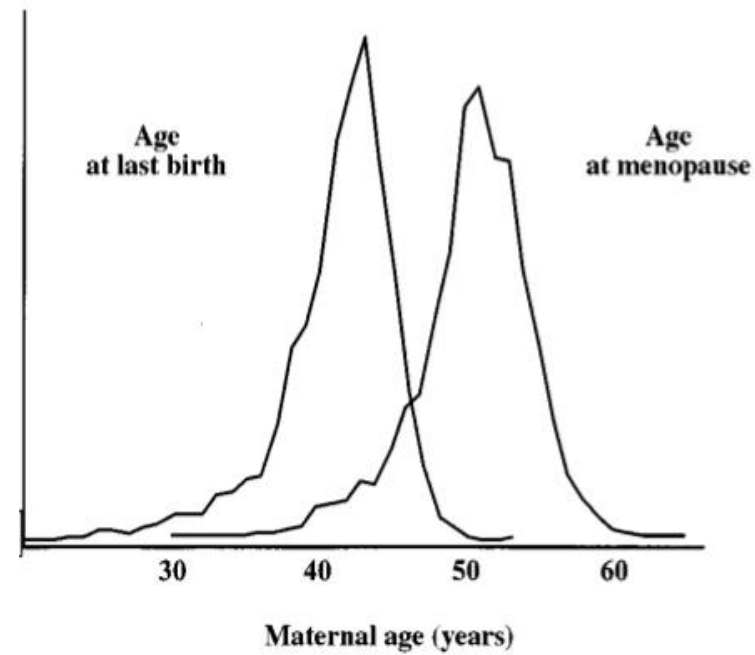
• Infertility was defined as having tried for 12 months or more or having sought medical help to conceive.



Leaders in Fertility

What you need to know

Menopause and Mum



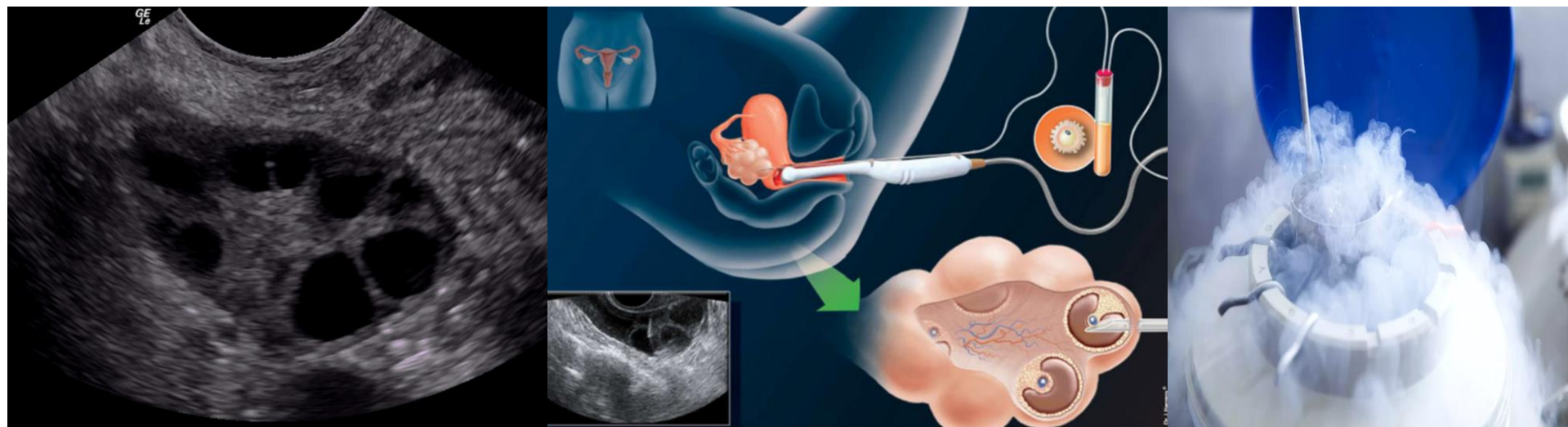
Graph based on calculations of the monthly hazard of live birth conception among Hutterite women based on Larsen and Yan (2000) [4].



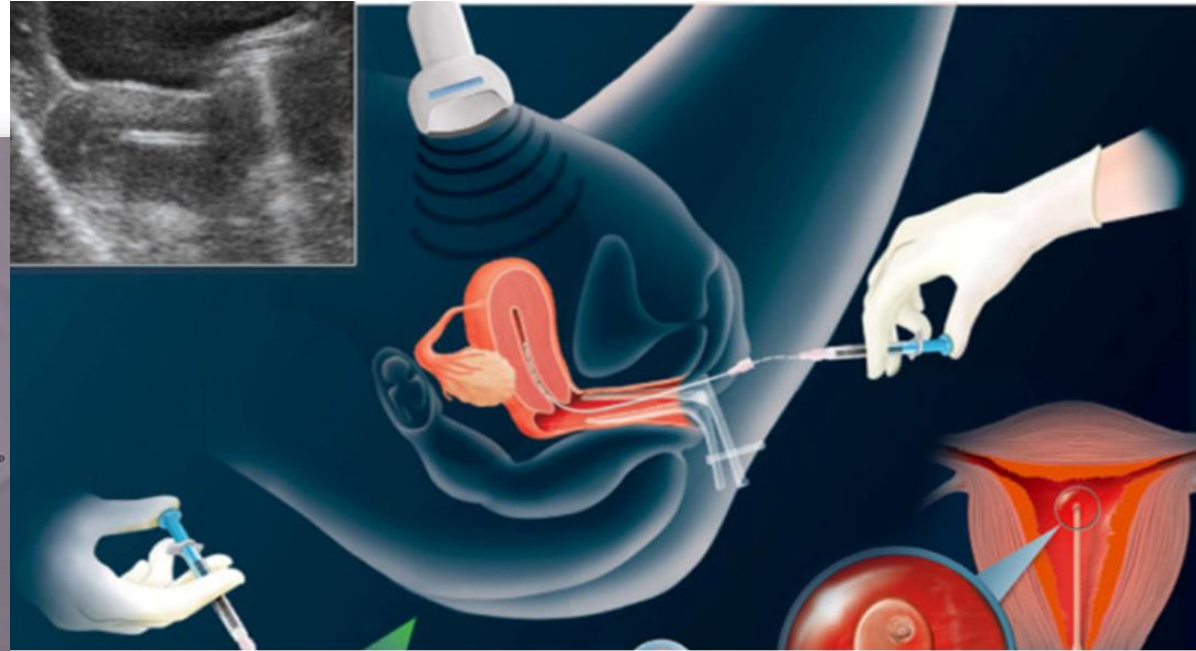
Egg freezing

The process of one cycle





How is it done? Thawing and Embryo Transfer



How many eggs do I need?

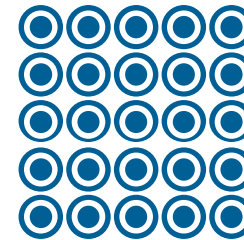
Studies demonstrate how many eggs are required per baby
(50% chance)



25-37 YEARS
10 eggs



38-40 YEARS
15 eggs

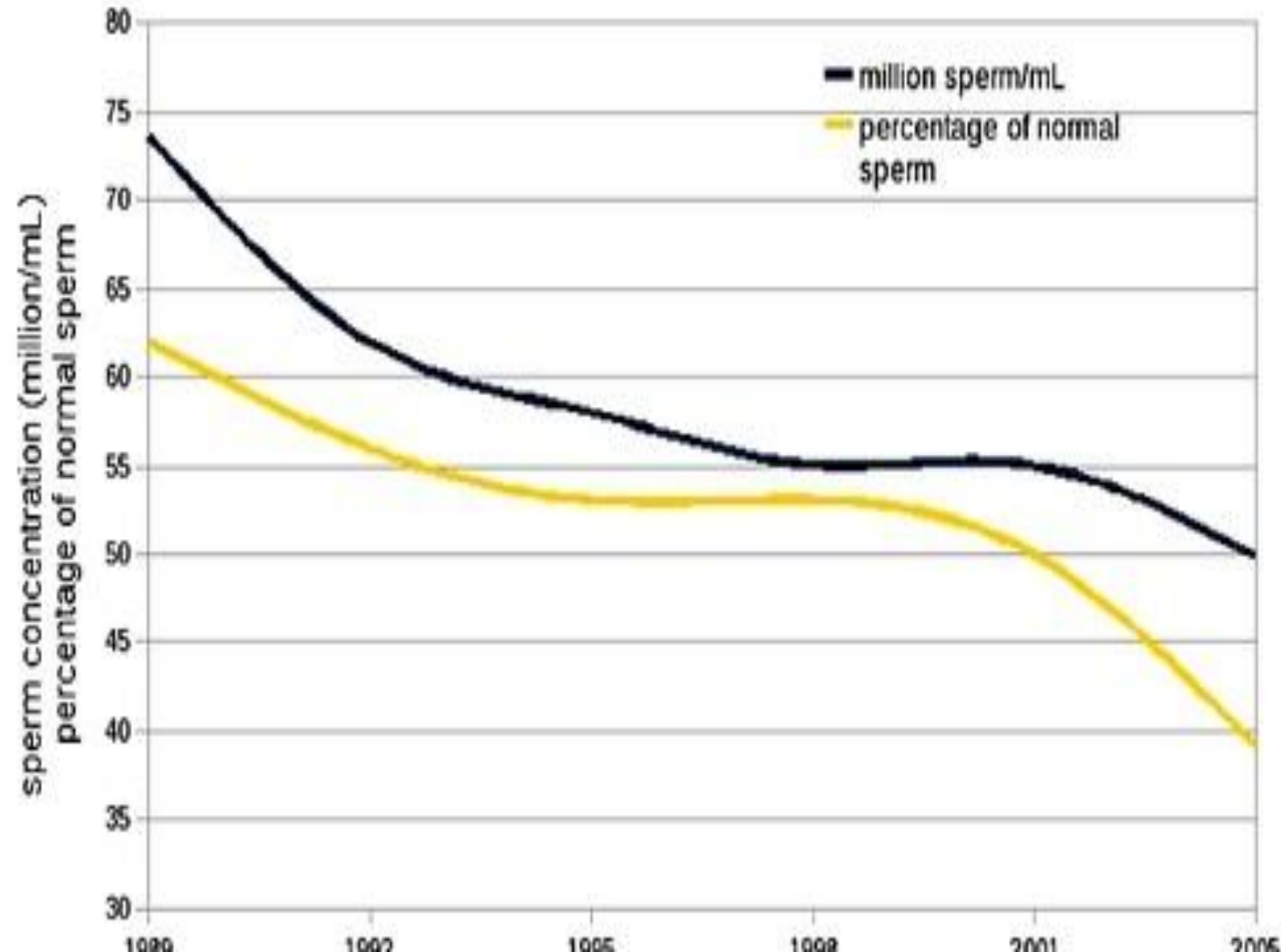


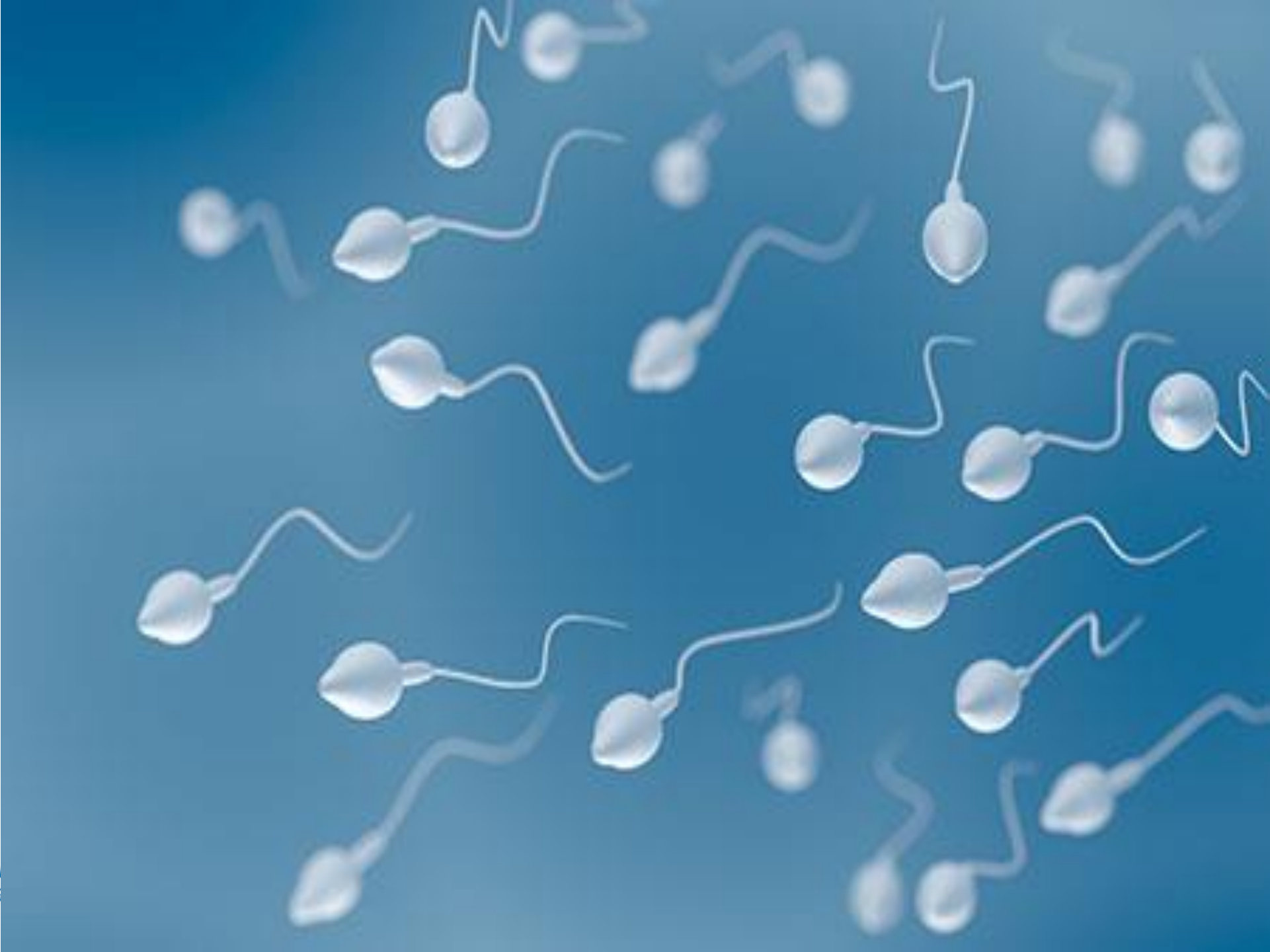
41-42 YEARS
25 eggs



Sperm Concentration (France)

Source: Rolland et al., Human Reproduction (2013) 28 (2): 462-470





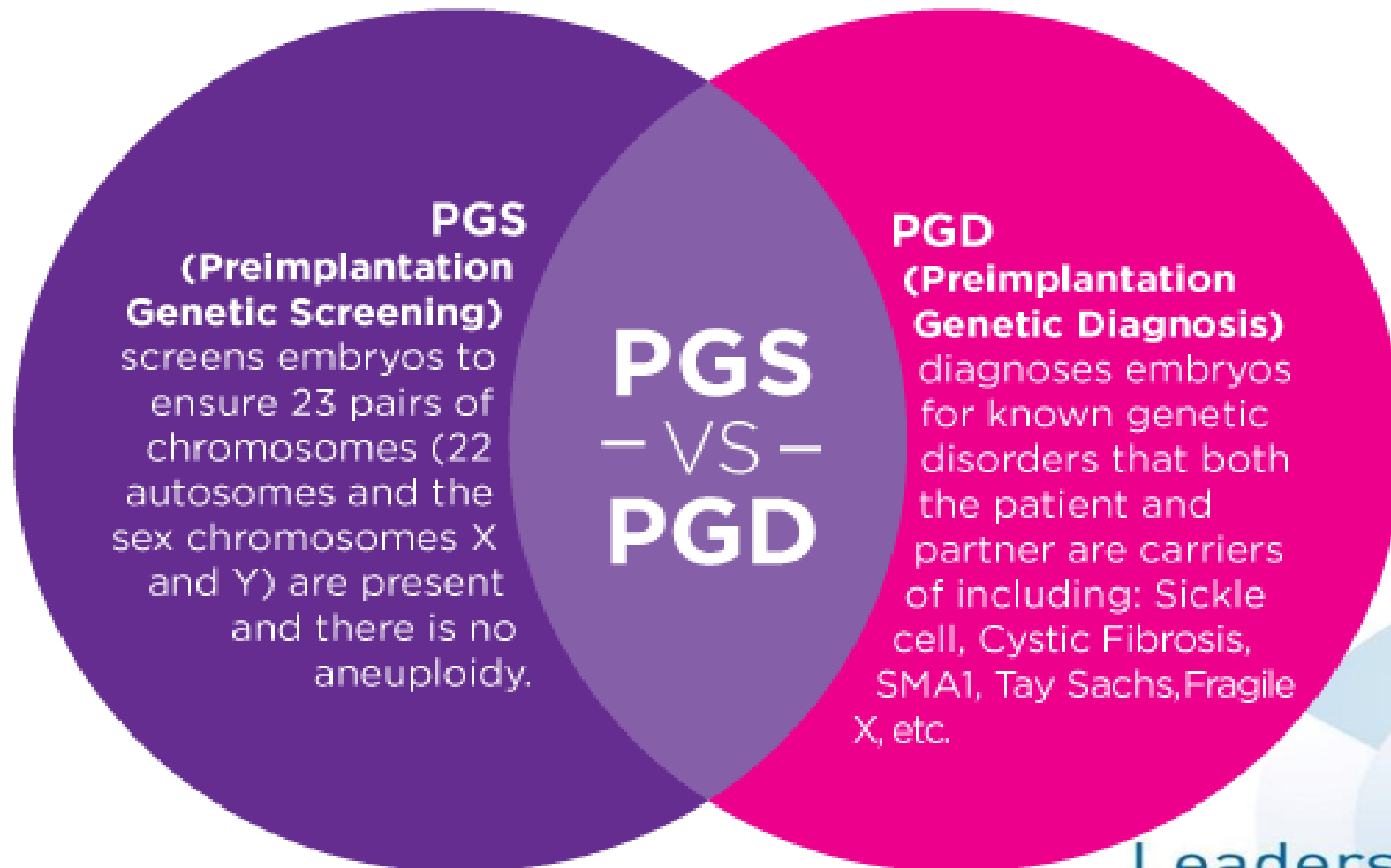
TIMI

- First embryoscope was developed in 2008
- One of the advancing areas in IVF treatment



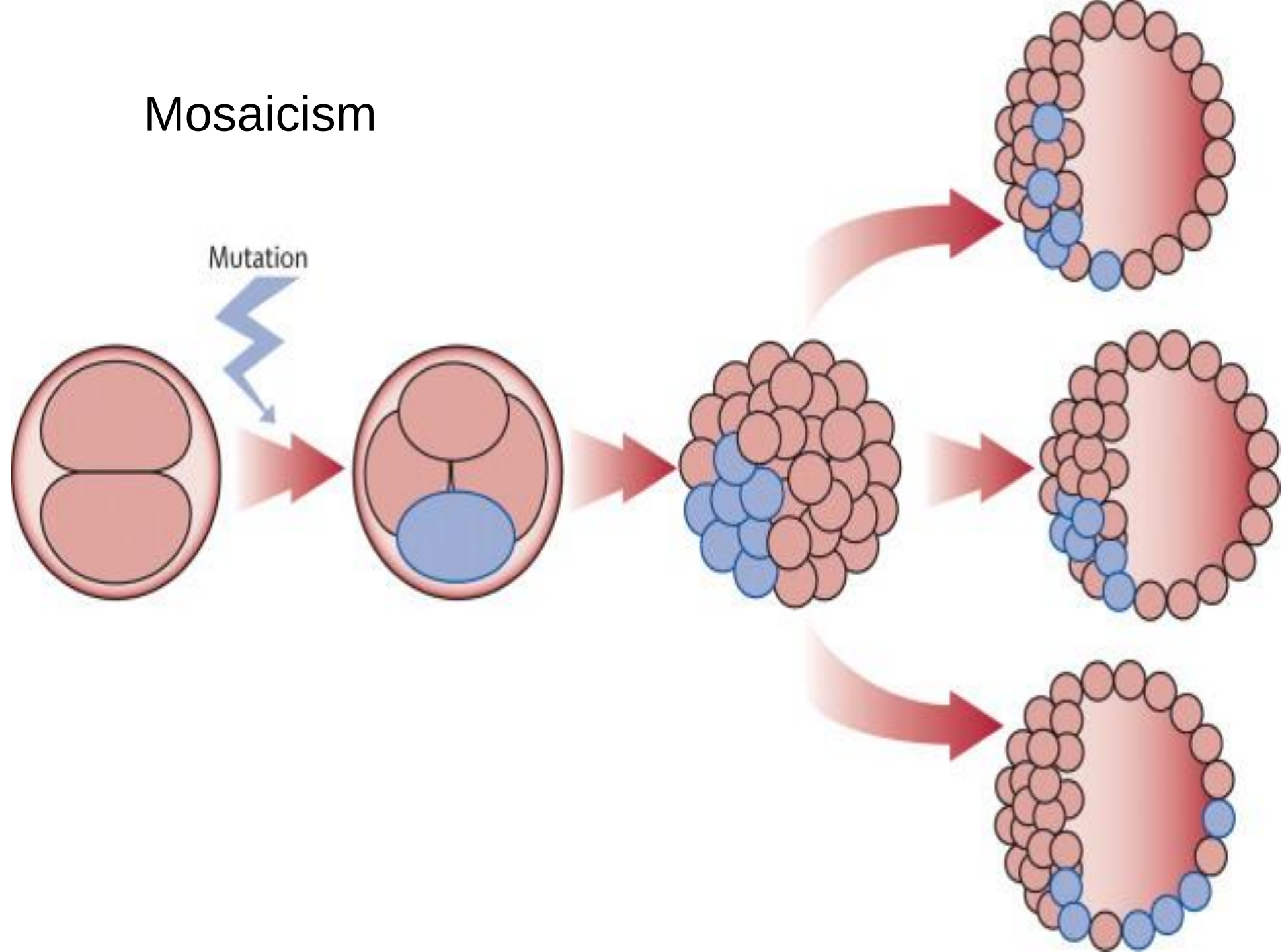


What's the Difference ?





Mosaicism



Genetic Carrier Screening

- Can identify couples that may be at increased risk for having a baby affected with a specific heritable disease.
- Everyone carries up to 3 mutations for severe recessive conditions
- Some populations have higher carrier frequencies than others for certain conditions

Carrier Screening

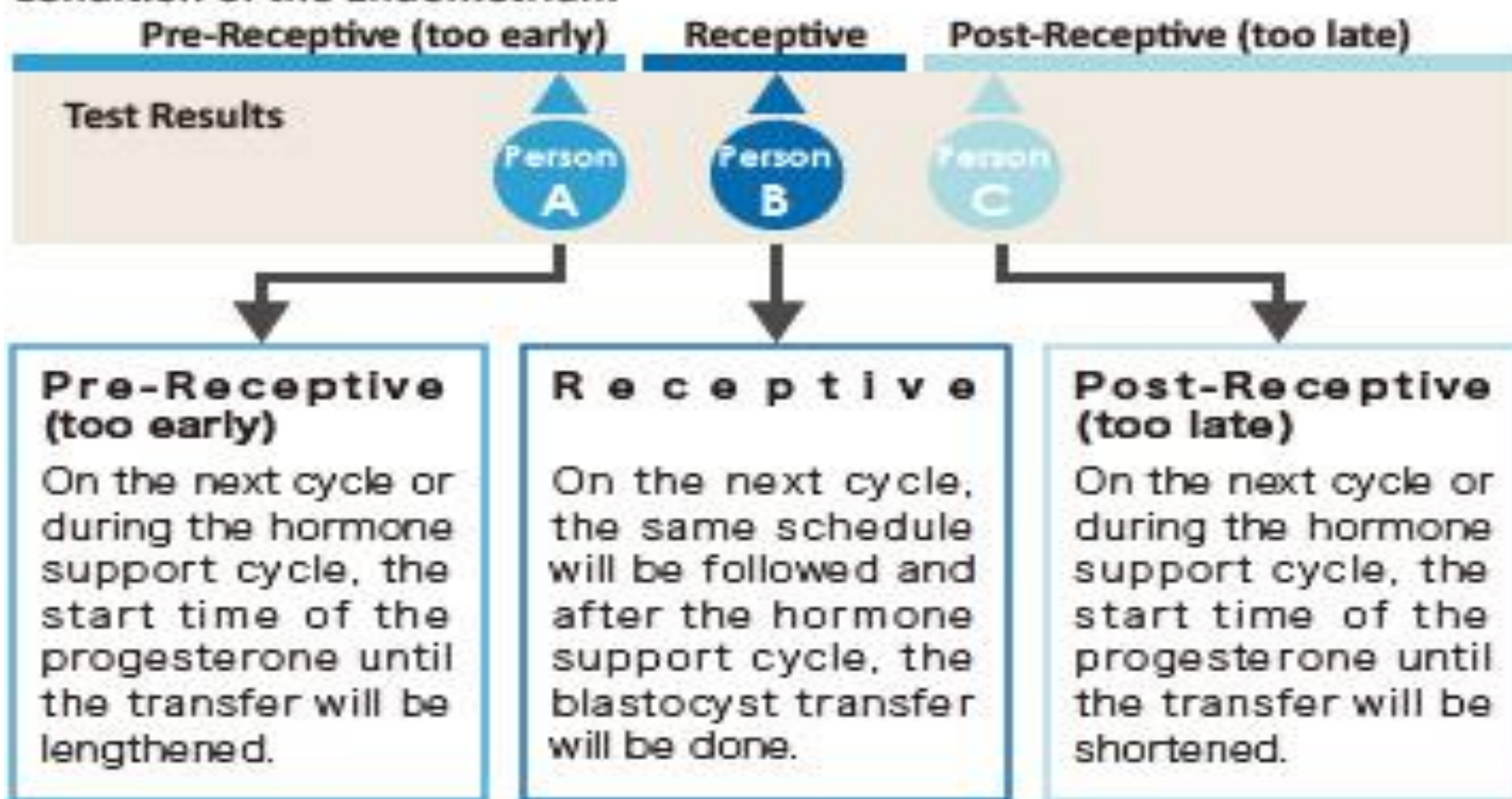
- Now recommended by RANZCOG to be offered
 - Where available, carrier status screening of women with a low probability for the more common genetic conditions (e.g. cystic fibrosis, spinal muscular atrophy, fragile X syndrome) may be offered. Women considering whether to have the test should be appropriately informed of the benefits and limitations of testing, and any associated costs. (*Consensus-based recommendation*)

Carrier Screening

- A number of recessive conditions can be screened for
- Karyotype testing not included with this.
- FA group offer the “*Prepair*” test for our patients

Condition	Carrier Frequency	Rate of Affected People
Cystic Fibrosis	1 / 25	1 / 2500
SMA	1 / 40	1 / 6000 - 10000
Fragile X Syndrome	1 / 150	1 / 4000

Condition of the Endometrium



Other technological advances

- Gene editing
 - CRISPR
- Vaginal and uterine microbiome
- Uterine transplants
 - Sweden
- Artificial uteri
- Artificial gametes

