Il tempo delle mele.
Come è cambiata la PMA in Italia a 10 anni dall'introduzione dell'ovodonazione

Paola Vigano'

Fondazione IRCCS Ca' Granda
Ospedale Maggiore Policlinico
Milano

Le premesse

- Vitrification is transforming the reproductive landscape in novel and complex ways. (Tober et al. 2020)

Registro ISS 2021

Ovociti crioconservati con vitrificazione 14.729
Ovociti crioconservati con protocollo lento 87

- The oocyte donation programme has increased access to treatment and has reduced the cross-border reproductive care

Registro ISS
2015 N° coppie con ovodonazione 1308
2021 N° coppie con ovodonazione 9071

- Italian patients and clinicians face the problem of very limited availability of oocyte donors at a local level.

(La Marca et al. 2020)

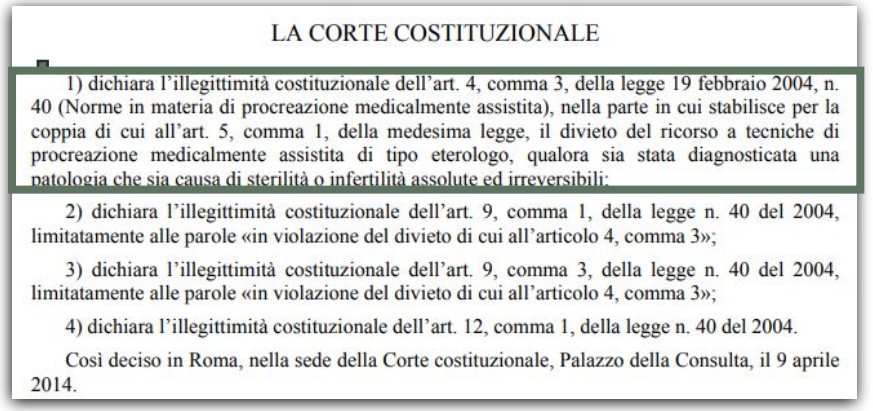
Registro ISS 2021
0,01% è stato donato

SENTENZA N. 162

ANNO 2014

REPUBBLICA ITALIANA
IN NOME DEL POPOLO ITALIANO

LA CORTE COSTITUZIONALE



LA CORTE COSTITUZIONALE

1) dichiara l'illegittimità costituzionale dell'art. 4, comma 3, della legge 19 febbraio 2004, n. 40 (Norme in materia di procreazione medicalmente assistita), nella parte in cui stabilisce per la coppia di cui all'art. 5, comma 1, della medesima legge, il divieto del ricorso a tecniche di procreazione medicalmente assistita di tipo eterologo, qualora sia stata diagnosticata una patologia che sia causa di sterilità o infertilità assolute ed irreversibili;

2) dichiara l'illegittimità costituzionale dell'art. 9, comma 1, della legge n. 40 del 2004, limitatamente alle parole «in violazione del divieto di cui all'articolo 4, comma 3»;

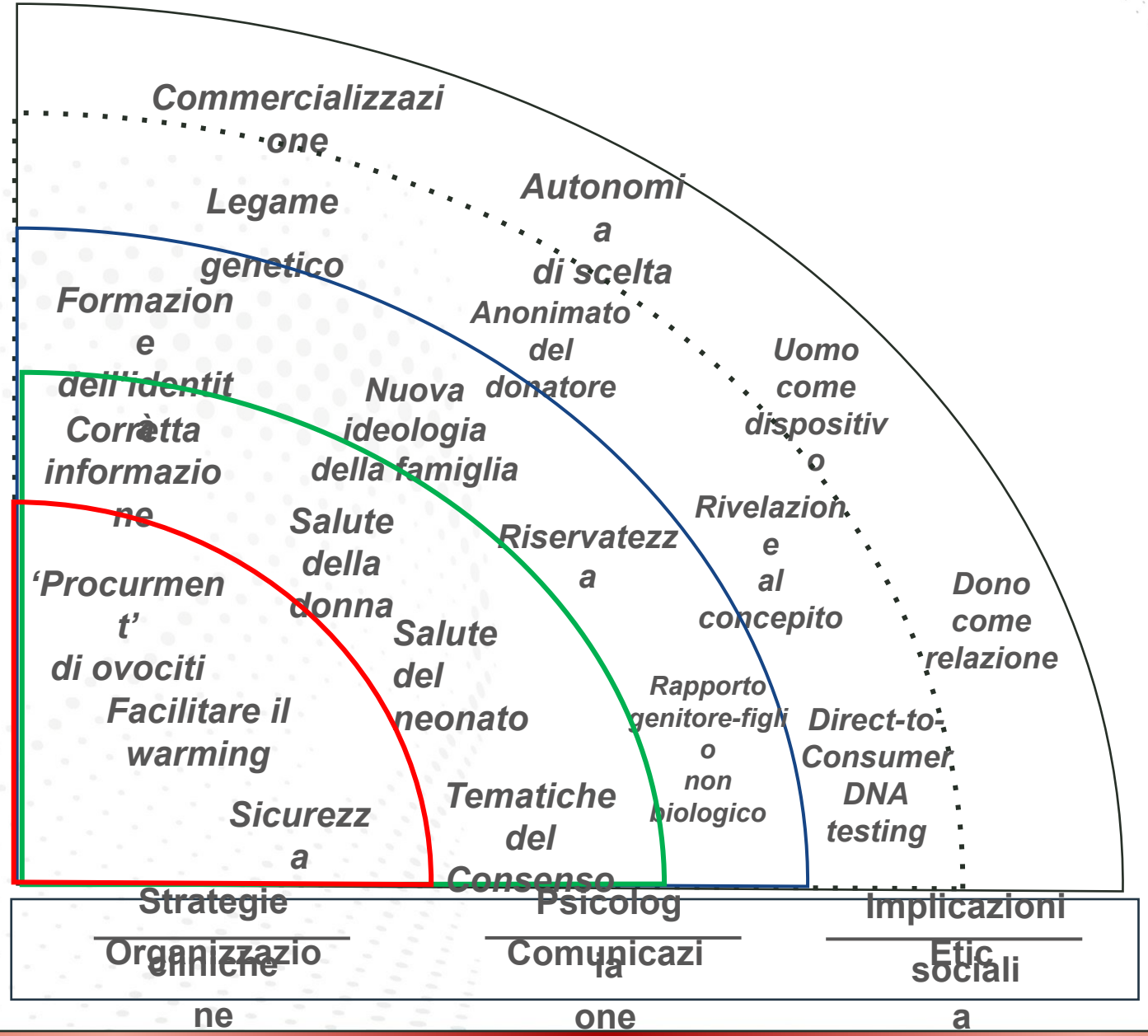
3) dichiara l'illegittimità costituzionale dell'art. 9, comma 3, della legge n. 40 del 2004, limitatamente alle parole «in violazione del divieto di cui all'articolo 4, comma 3»;

4) dichiara l'illegittimità costituzionale dell'art. 12, comma 1, della legge n. 40 del 2004.

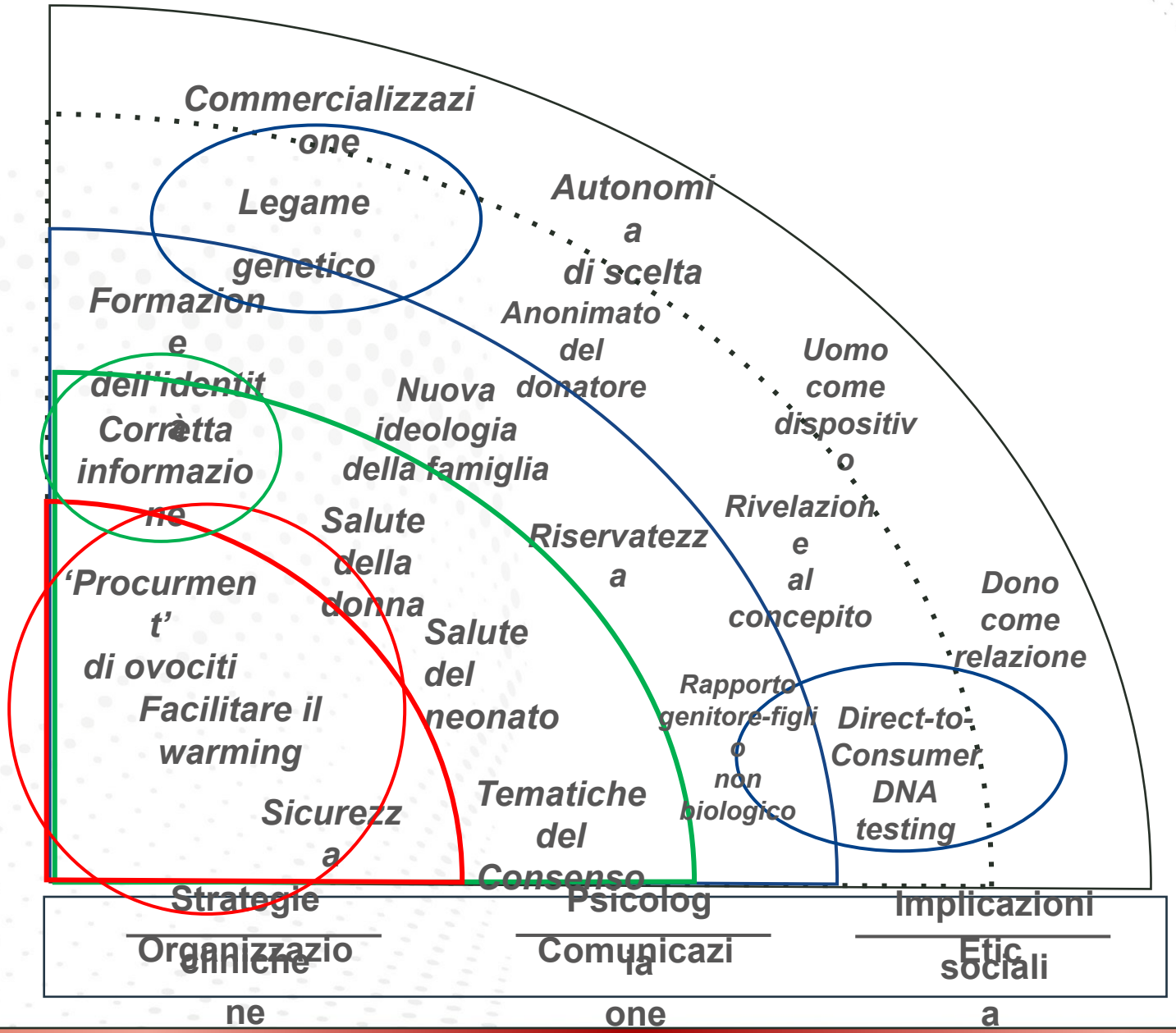
Così deciso in Roma, nella sede della Corte costituzionale, Palazzo della Consulta, il 9 aprile 2014.

Guo SW..

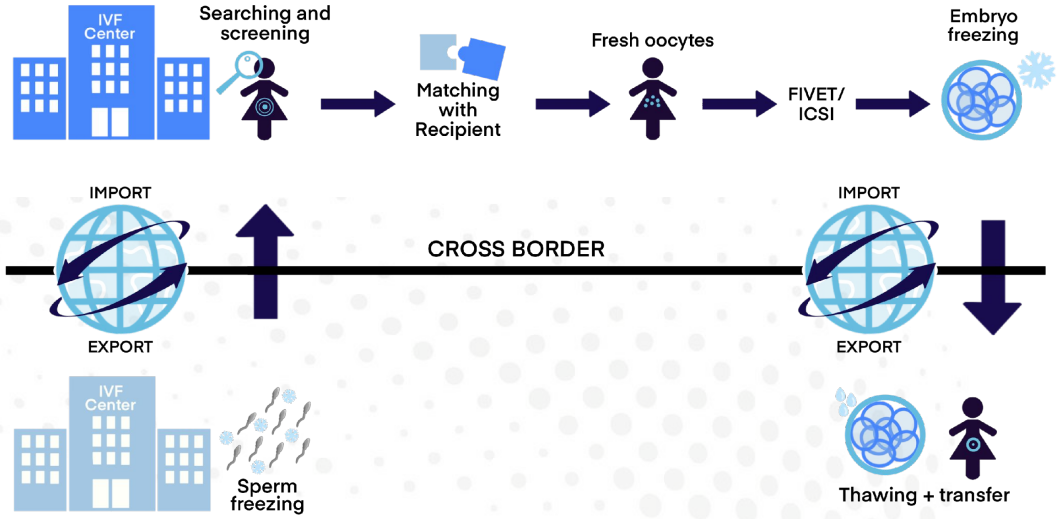
L’impatto dell’ovodonazione a vari livelli

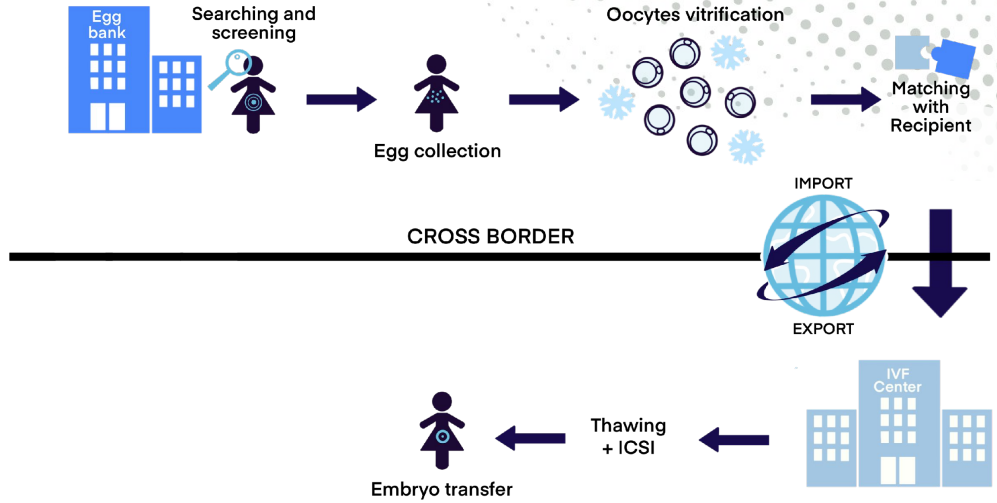


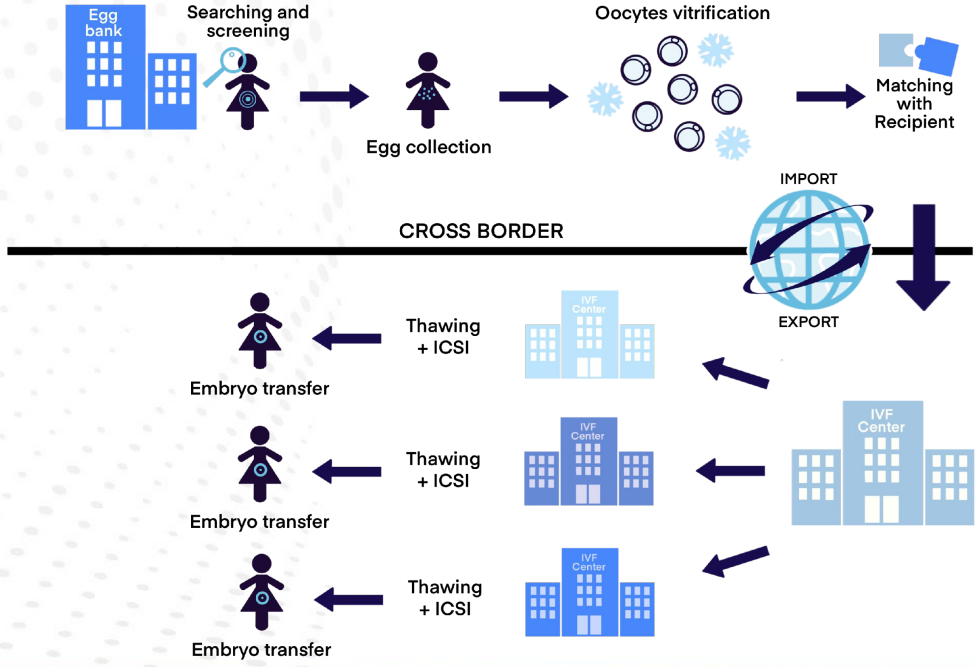
L’impatto dell’ovodonazione a vari livelli



Le diverse strategie di ‘procurement’







Le diverse strategie di 'procurement': donazione di ovociti vitrificati o freschi?

Human Reproduction, Vol.34, No.2 pp. 285–290, 2019
Advanced Access publication on December 6, 2018 doi:10.1093/humrep/dey331

human reproduction ORIGINAL ARTICLE *Infertility*

A novel transnational fresh oocyte donation (TOD) program based on transport of frozen sperm and embryos

A. La Marca[1,*], M. Dal Canto[2,3], M. Buccheri[2], M. Valerio[2], M. Mignini Renzini[2,3], A. Rodriguez[4], and R. Vassena[4]

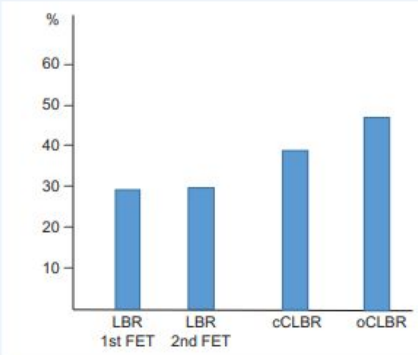


Figure 2 The live birth rate after the first and second frozen embryo transfer and the conservative (cLBR) and optimistic (oLBR) calculation of the cumulative live birth rate.

Transnational oocyte donation program: fresh versus vitrified oocytes

Parmegiani et al.

102 blastocyst transfers in 100 patients…….a CPR of 56.9% (58/102), an implantation rate of 42.7% and a live birth rate (LBR) of 48.0%.

……, we disagree with the conclusion of La Marca et al. that the fresh TOD model should be considered the preferred option for oocyte donation program

Reply: The transnational fresh oocyte donation. Should it be the first choice when implementing an egg donation program in countries with low availability of donors?

La Marca et al.

----------we note that while eight vitrified oocytes are imported per patient, the average number of injected oocytes per cycle in the authors clinic was 6.4, indicating a survival rate of approximately 80%, well below that reported by using frozen embryos (98.5% in our own study).

we reported that 85% of patients not pregnant after the first embryo transfer had at least one embryo frozen for a second embryo transfer

Considering the organizational aspect and the very high level of results provided, we strongly recommend the TOD program to the IVF centers aiming to develop a strong and reliable egg donation program.

Parmegiani L, Quintero L, Filicori M. Transnational oocyte donation program: fresh versus vitrified oocytes. Hum Reprod. 2019
La Marca A, Dal Canto M, Mignini Renzini M, Rodriguez A, Vassena R. Reply: The transnational fresh oocyte donation. Should it be the first choice when implementing an egg donation program in countries with low availability of donors? Hum Reprod. 2019

Not all oocyte cryobanks are the same

TABLE 3 LABORATORY OUTCOME DIVIDED BY THE THREE SPANISH CRYOBANKS

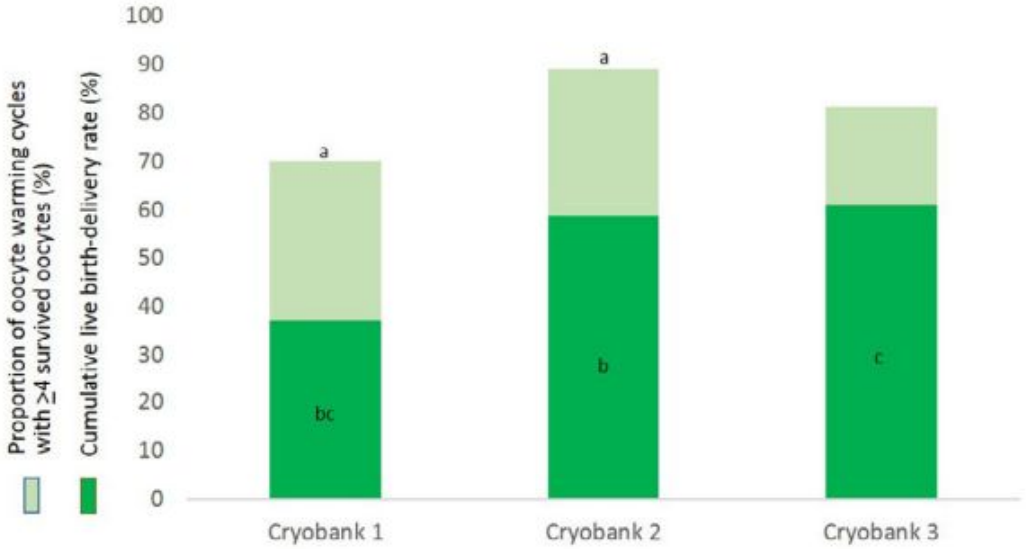
	Cryobank		
	1	2	3
Oocyte warming cycles, *n*	77	109	63
Age (mean ± SD), years	43.6 ± 4.3	42.6 ± 4.3	42.8 ± 4.1
Warmed oocytes, *n*	448	701	386
Survived oocytes, *n* (%)	349 (77.9)[a]	588 (83.9)[a]	307 (79.5)
Fertilized oocytes, *n* (%)	251 (72.0)	462 (78.6)	232 (75.6)

RBMO
ELSEVIER
ARTICLE

Oocyte donation: not all oocyte cryobanks are the same

BIOGRAPHY
Dr Luca Gianaroli is Scientific Director of S.I.S.Me.R. (Italian Society for Reproductive Medicine Studies). He is Past-Chair of the ESHRE, a member of the Society Certification Committee, of the COVID-19 Working-Group, and coordinates the ESHRE ART Centre Certification programme. He is currently Director of Global Educational Programs of IFFS.

Luca Gianaroli*, Anna Pia Ferraretti, Davide Perruzza, Gaia Terzuoli, Silvia Azzena, Andor Crippa, Aneta Dworakowska, Carla Tabanelli, M. Cristina Magli



Gianaroli L, Ferraretti AP, Perruzza D, Terzuoli G, Azzena S, Crippa A, Dworakowska A, Tabanelli C, Magli MC. Oocyte donation: not all oocyte cryobanks are the same. Reprod Biomed Online. 2022

La Banca Gameti Lombarda

Cosa?

- **Attivare l'acquisizione di gameti in caso di insufficiente disponibilità da strutture nazionali**
- **Verificare il trasporto di gameti donati secondo la normativa vigente**
- **Verificare la presenza della documentazione per garantire la tracciabilità**
- **Garantire la corretta conservazione dei gameti**
- **Garantire la corretta etichettatura, confezionamento ed imballaggio**
- **Coordinare la distribuzione dei gameti sul territorio regionale**

Come?

- **Bando regionale con requisiti di sicurezza e tecnici**
- **Assegnazione dei vincitori**
- **Modalità di rotazione degli ordini nelle banche**
- **Monitoraggio gravidanze.**

Per chi?

I centri pubblici e privati convenzionati

Can we thaw donor oocytes with a different commercial kit than the one used for the vitrification process?

Journal of Assisted Reproduction and Genetics (2020) 37:1379–1385
https://doi.org/10.1007/s10815-020-01798-3

ASSISTED REPRODUCTION TECHNOLOGIES

"Universal Warming" protocol for vitrified oocytes to streamline cell exchange for transnational donation programs: a multi-center study

Lodovico Parmegiani [1,2] · M. G. Minasi [3] · A. Arnone [1,2] · V. Casciani [3] · G. E. Cognigni [1,2] · R. Viñoles [2,4] · M. T. Varricchio [3] · L. A. Quintero [2,4] · E. Greco [3] · M. Filicori [1,2]

Rapid warming increases survival of slow-frozen sibling oocytes: a step towards a single warming procedure irrespective of the freezing protocol?

Lodovico Parmegiani [a,*], Carla Tatone [b], Graciela Estela Cognigni [a], Silvia Bernardi [a], Enzo Troilo [a], Alessandra Arnone [a], Antonio Manuel Maccarini [a], Giovanna Di Emidio [b], Maurizio Vitti [b], Marco Filicori [a]

Vitrified Donor oocytes N=1898

Warming in two centers
(first-in-first out basis)

Vitrification solution
DMSO-ethylene glycole
Idrossipropilcellulosa
Trealosio

KK
Idrossipropilcellulosa
Trealosio

KI
Dextran serum supplement
Saccarosio

Primary outcome: Survival rate

Secondary outcomes:
Fertilisation rate
Blastulation rate
Implantation rate
Live birth rate

Parmegiani L, Minasi MG, Arnone A, Casciani V, Cognigni GE, Viñoles R, Varricchio MT, Quintero LA, Greco E, Filicori M. "Universal Warming" protocol for vitrified oocytes to streamline cell exchange for transnational donation programs: a multi-center study. J Assist Reprod Genet. 2020

Can we thaw donor oocytes with a different commercial kit than the one used for the vitrification process?

Journal of Assisted Reproduction and Genetics (2020) 37:1379–1385
https://doi.org/10.1007/s10815-020-01798-3

ASSISTED REPRODUCTION TECHNOLOGIES

Check for updates

"Universal Warming" protocol for vitrified oocytes to streamline cell exchange for transnational donation programs: a multi-center study

Lodovico Parmegiani[1,2] · M. G. Minasi[3] · A. Arnone[1,2] · V. Casciani[3] · G. E. Cognigni[1,2] · R. Viñoles[2,4] · M. T. Varricchio[3] · L. A. Quintero[2,4] · E. Greco[3] · M. Filicori[1,2]

Table 2 Clinical results

	Group KK	Group KI	P Value
No. of surviving oocytes / warmed oocytes (%) (Min-Max%)	795/939 (84.6) (37.5–100)	787/959 (82.1) (25.0–100)	0.145
No. of fertilized oocytes / injected oocytes (%) (Min-Max%)	602/795 (75.7) (20.0–100)	633/787 (80.4) (16.6–100)	0.027
No. of obtained blastocysts / fertilized oocytes (%) (Min-Max%)	352/602 (58.5) (25.0–100)	366/633 (57.2) (33.3–100)	0.861
No. of pregnancies / embryo transfers (%) (Min-Max%)	69/118 (58.5) (0.0–100)	67/120 (55.8) (0.0–100)	0.779
No. of gestational sacs / transferred blastocysts (%) (Min-Max%)	80/193 (41.5) (50.0–100)	84/183 (45.9) (50.0–100)	0.444
No. of pregnancies leading to births / embryo transfers (%) (Min-Max%)	62/118 (52.5) (0.0–100)	54/120 (45.0) (0.0–100)	0.301
No. of multiple gestation /pregnancies (%) (Min-Max%)	11/69 (15.9) (0.0–100)	17/67 (25.4) (0.0–100)	0.251

Parmegiani L, Minasi MG, Arnone A, Casciani V, Cognigni GE, Viñoles R, Varricchio MT, Quintero LA, Greco E, Filicori M. "Universal Warming" protocol for vitrified oocytes to streamline cell exchange for transnational donation programs: a multi-center study. J Assist Reprod Genet. 2020

RBMO

ELSEVIER

ARTICLE

Fast and furious: pregnancy outcome with one-step rehydration in the warming protocol for human blastocysts

BIOGRAPHY

Juergen Liebermann, PhD, HCLD has been an IVF Laboratory Director since 1996. He received his doctoral degree from the Technical University Munich (Germany) in 1995, and his postdoctorate degree from the University of Wuerzburg (Germany) in 2004. His research focuses on optimizing egg and embryo vitrification to improve clinical outcomes.

J. Liebermann*, R. Brohammer, Y. Wagner, R. Smith, K. Even, J. Hirshfeld-Cytron, M.L. Uhler

RBMO

ELSEVIER

SHORT COMMUNICATION

Fast and furious: successful survival and resumption of meiosis in immature human oocytes vitrified and warmed using a short protocol

Vitrified
Immature oocytes
GV N=561
MI N=218

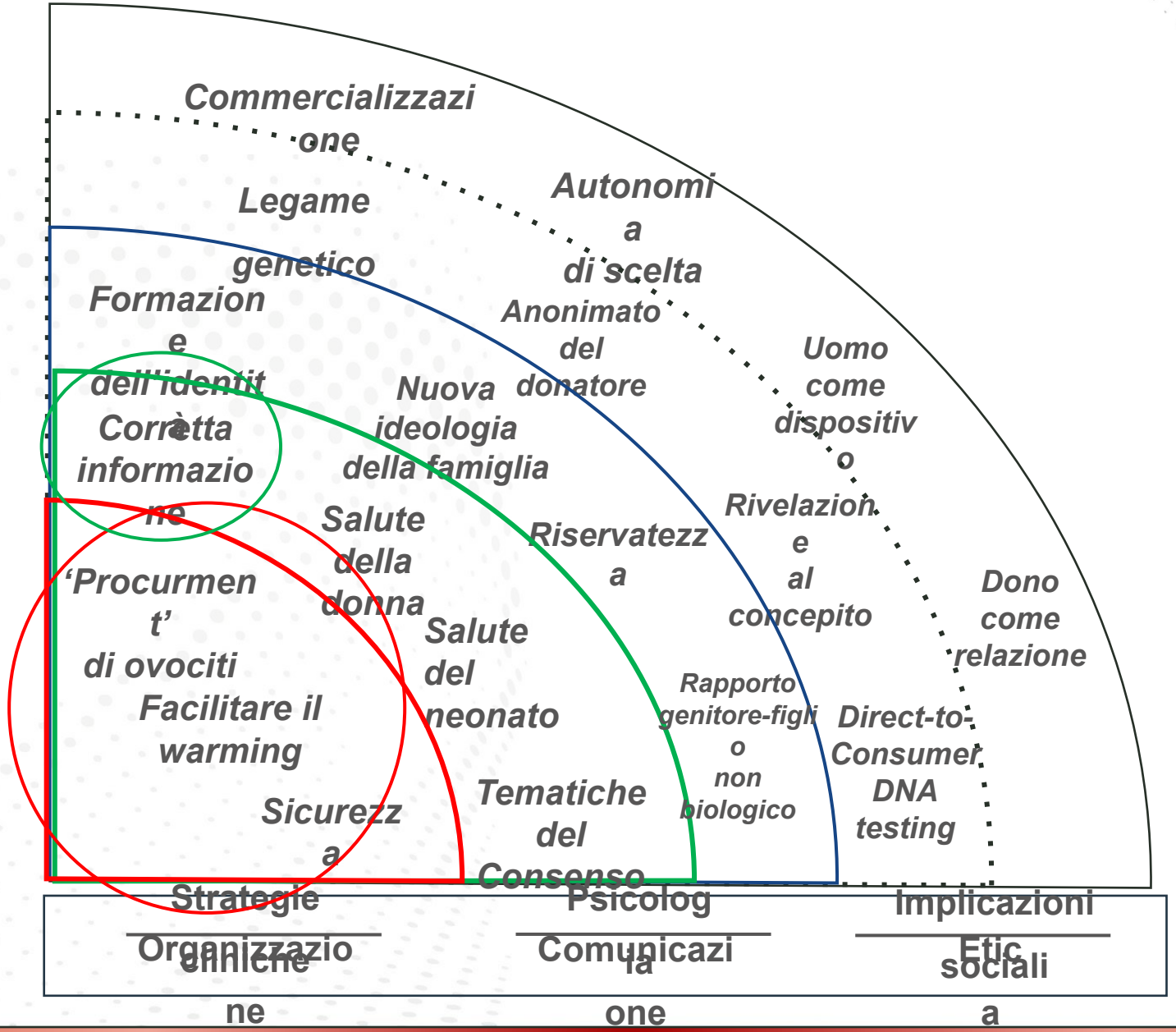
vitrified at room T for 2 min
Warming at 37°C for 2 min

Of the 561 germinal vesicles
92.1% converted to metaphase I oocytes after 24 h of culture.
54.4% converted to metaphase II oocytes after 48 h of culture. No difference compared to the control group.

Of metaphase I oocytes
95.4% (208/218) survived warming, and 84.1% converted to metaphase II oocytes after 24 h of culture.
No difference compared to the control group.

Liebermann J, Brohammer R, Wagner Y, Smith R, Even K, Hirshfeld-Cytron J, Uhler ML. Fast and furious: successful survival and resumption of meiosis in immature human oocytes vitrified and warmed using a short protocol. Reprod Biomed Online. 2024

L’impatto dell’ovodonazione a vari livelli



2013.....

CORRIERE DELLA SERA / SALUTE

» Corriere della Sera › Salute › *Fecondazione assistita, non tuttoè possibile e non è possibile sempre*

Fecondazione assistita, non tutto è possibile e non è possibile sempre

Aspettative realistiche, illusioni, disillusioni. Le battaglie per sconfiggere l'infertilità hanno complessi aspetti psicologici

COSTI ALTI - Stesso discorso vale per chi, volendo ricorrere all'inseminazione eterologa o alla ovodonazione, proibite in Italia, deve rivolgersi a un centro estero. Come d'altronde deve fare chi ha più di 42-43 anni, età oltre la quale pressoché nessuna Regione offre più la Pma in ambito pubblico. Racconta Maurizio Bini, responsabile del Centro di procreazione assistita dell'ospedale Niguarda di Milano: «Fa una certa impressione, arrivando a Barcellona, vedere all'aeroporto cartelloni con una scritta di benvenuto non per i turisti italiani in genere, ma per le coppie italiane». Eh sì, perché in Spagna, come d'altronde in Svizzera, in Inghilterra o a Malta, non ci sono le restrizioni italiane e quello che da noi non è consentito dalla legge là si può in genere fare, pur tenendo conto delle differenze legislative da Paese a Paese. Pagando naturalmente. Cifre che si aggirano, per la semplice inseminazione nell'utero intorno ai 1.000 euro; per ogni ciclo di Fivet (la fecondazione in vitro classica) da circa 3.000 euro fino a 10.000, mentre per la Icsi, la fecondazione in vitro effettuata iniettando lo spermatozoo nell'ovulo, tecnica più complessa che si usa se ci sono particolari difficoltà, i costi salgono di almeno 1.000 euro in più rispetto alla Fivet.

2022.....

Fecondazione eterologa: 100esima gravidanza a Niguarda

24.03.2022

"Purtroppo l'emergenza Covid ha rallentato la nostra attività, ma nonostante questo oggi siamo qui a festeggiare un bellissimo traguardo e a condividere la gioia di 100 coppie che possono finalmente vedere realizzato il desiderio di diventare genitori" - commenta **Maurizio Bini**, responsabile del Centro.
Una "gioia senza confini": 11 coppie, infatti, provengono da altre Regioni italiane, in cui il servizio di fecondazione eterologa non è ancora stato istituito.
"Più dell'80% delle procedure effettuate sono di secondo livello, ossia l'embrione viene prodotto in laboratorio e successivamente impiantato nella donna - spiega Bini - *e in 4 casi la gravidanza è stata ottenuta con una doppia donazione, cioè utilizzando sia spermatozoi che ovociti donati".*
Sempre a Niguarda, tra l'altro, ha sede anche la **Banca dei Gameti Lombarda**, che si occupa della conservazione dei gameti (spermatozoi e/o ovociti), forniti a tutti i centri regionali.

"Un bel risultato da festeggiare e di cui andare orgogliosi per gli operatori del Centro di terapia della Sterilità del Niguarda che aiuta le coppie nella loro aspirazione di diventare genitori. La nascita di un figlio è sempre una grande gioia per mamma e papà, per le famiglie e per i loro amici, che si stringono affettuosamente in un abbraccio attorno a loro e al nuovo nato. A loro si aggiunge il mio di abbraccio e quello dei sanitari che seguono le gravidanze con grande professionalità e premura, adoperandosi perché tutto vada al meglio e nasca una nuova vita" - conclude **Letizia Moratti**, Vice Presidente e Assessore al Welfare di Regione Lombardia.

Google ovodonazione tassi di successo

2011-2012

[redacted]

Le differenze tra Inseminazione Artificiale e la ...

Dec 22, 2011 — In certi casi la probabilità **di successo** raggiunge il 60%. 7. Non offre reali possibilità **di successo** in caso di tube ostruite o gravi fattori maschili.

[redacted]

il nostro pogramma di ovodonazione

Mar 17 [redacted] ha disegnato un programma di **ovodonazione** per coppie residenti all'estero che permette di ottenere alti **tassi di successo** e, ...
4 pages

Linkiesta.it
https://www.linkiesta.it › 2011/06 · Translate this page

Sofia, un bimbo di due mesi e un incubo a Cipro

Jun 6, 2011 — Ed è felice. Lei e il marito sono dovuti andare all'estero per coronare il loro sogno, grazie a tecniche **di** Pma non consentite in Italia come l'**ovodonazione**.

WordPress.com
https://francescamarzano.wordpress.com › ... · Translate this page

ICSI percentuali di successo: quelle vere!

Oct 7, 2011 — Come si evince dalle percentuali in tabella, ogni anno dopo i 30 anni della donna, diminuisce sia la probabilità **di** ottenere una gravidanza (11% all' anno), che ...

2024

59% di successi/gravidanza cumulativa al primo ciclo, ossia con l'impiego di tutti gli embrioni prodotti nel ciclo attraverso vari trasferimenti. 93% di successo di gravidanza cumulativa dopo tre cicli, utilizzando tutti gli embrioni prodotti in ogni ciclo, in vari trasferimenti.

Dec 5, 2022

[redacted]

PMA Eterologa - Tassi di successo al 96%

Visita il Nostro Sito, Compila il Form e Prenota la tua Prima Visita in Pochi Minuti. Nei Centri Genera Garantiamo l'Ottenimento di Almeno un Embrione da Trasferire. Leader nella ricerca.

People also search for

fecondazione eterologa italia	ovodonazione italia
fecondazione omologa	inseminazione artificiale
ovodonazione, il bambino a chi assomiglia	ovodonazione secondo figlio
fecondazione in vitro	ovodonazione esperienze

Sponsored

[redacted]

Donatrici Anonime - Limite d'età 54 anni.

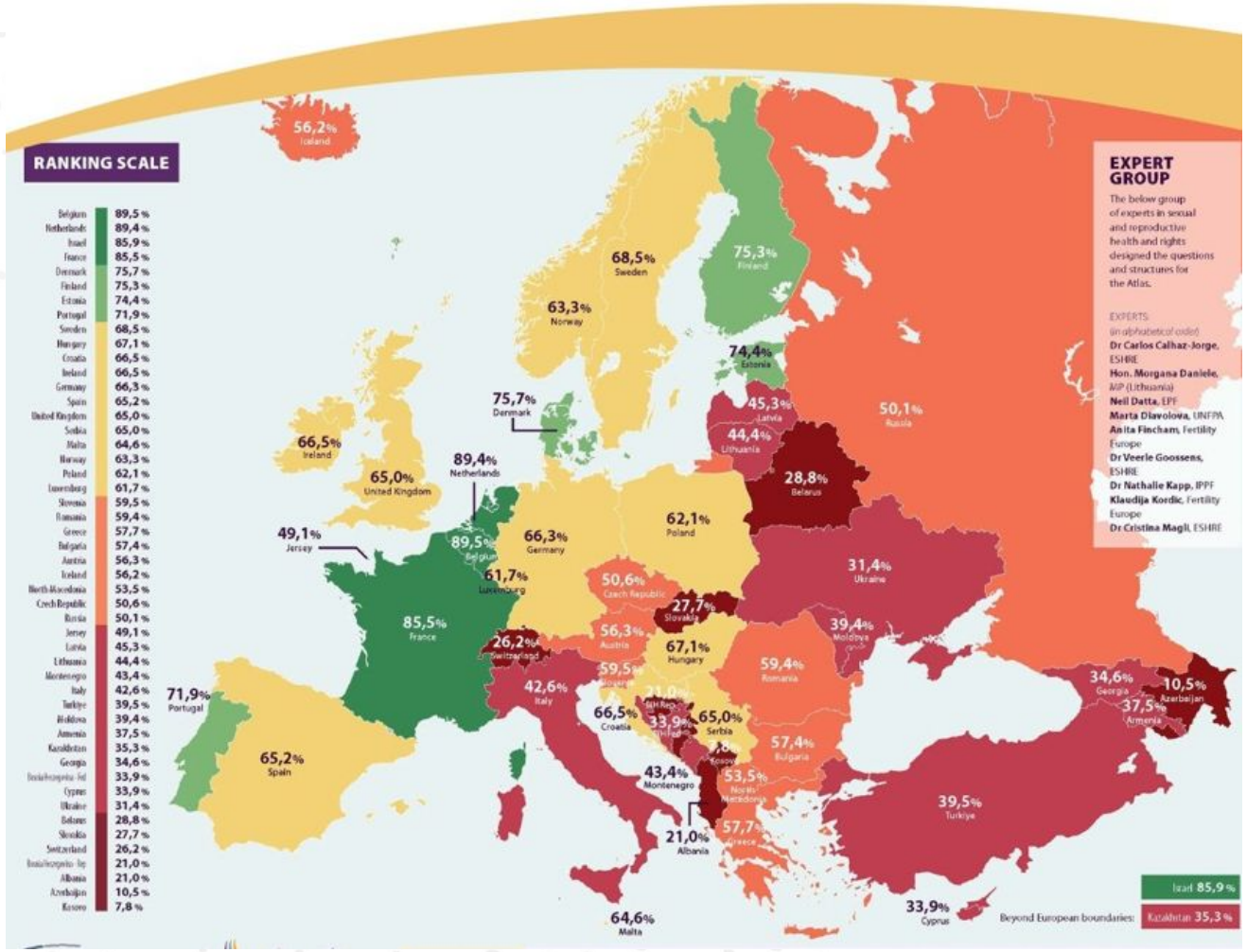
Le migliori percentuali di successo. Senza liste d'attesa. Limite d'età 54 anni. Senza liste...

[redacted]

Tasso di gravidanza del 77%. - 84% d'esito in eterologa

Clinica di fecondazione Spagna — Clinica miglior recensita dagli italiani. Tecnologie...

EUROPEAN ATLAS OF FERTILITY TREATMENT POLICIES 2024



PERFECT COUNTRY criteria:

- **Legislation**: Dedicated ART laws for stable access.
- **Data Management**: National registers for MAR treatments and for donors.
- **Inclusive Access**: Treatments and donor services are available to all who need them.
- **Genetic Testing**: Access to genetic testing for embryos.
- **Transparency**: Non-anonymous donation with donor identity revealed to children.
- **Funding**: Full treatment funding for 4 IUIs and 6 IVF/ICSI cycles nationwide.
- **Support Services**: Funded psychological support as part of fertility treatments.
- **Consultation**: Policymakers consult patient associations on policies and legal changes.
- **Education**: State-organized and funded fertility education programs.

Recommendations

- Recipients should be informed about the lack of (inter)national rules and quotas for the maximum number of offspring/families, and possible consequences of this.
- Recipients should be informed if and at what age their children can access identifiable information about the donor. They should also be provided with information about how any medically relevant updates and details on numbers of donor-siblings will or could be given to them.
- Recipients should be informed about the implications of direct-to-consumer genetic testing in combination with social media and online information with regards to their ability to not disclose donor-conception to their child and to the possibility that the donor, the offspring and/or extended family may find each other through this route.
- Recipients should be informed about the possibilities of donor-conceived offspring connecting through direct-to-consumer genetic testing with their donor or other genetic relatives and the importance of support and counselling for all the parties involved.
- Recipients and donor-conceived offspring with anonymous donors should be encouraged to consider that the donor may not expect to be found and will not have had counselling to prepare them.

Human Reproduction Open, Vol.00, No.0, pp. 1–26, 2022
https://doi.org/10.1093/hropen/hoac001

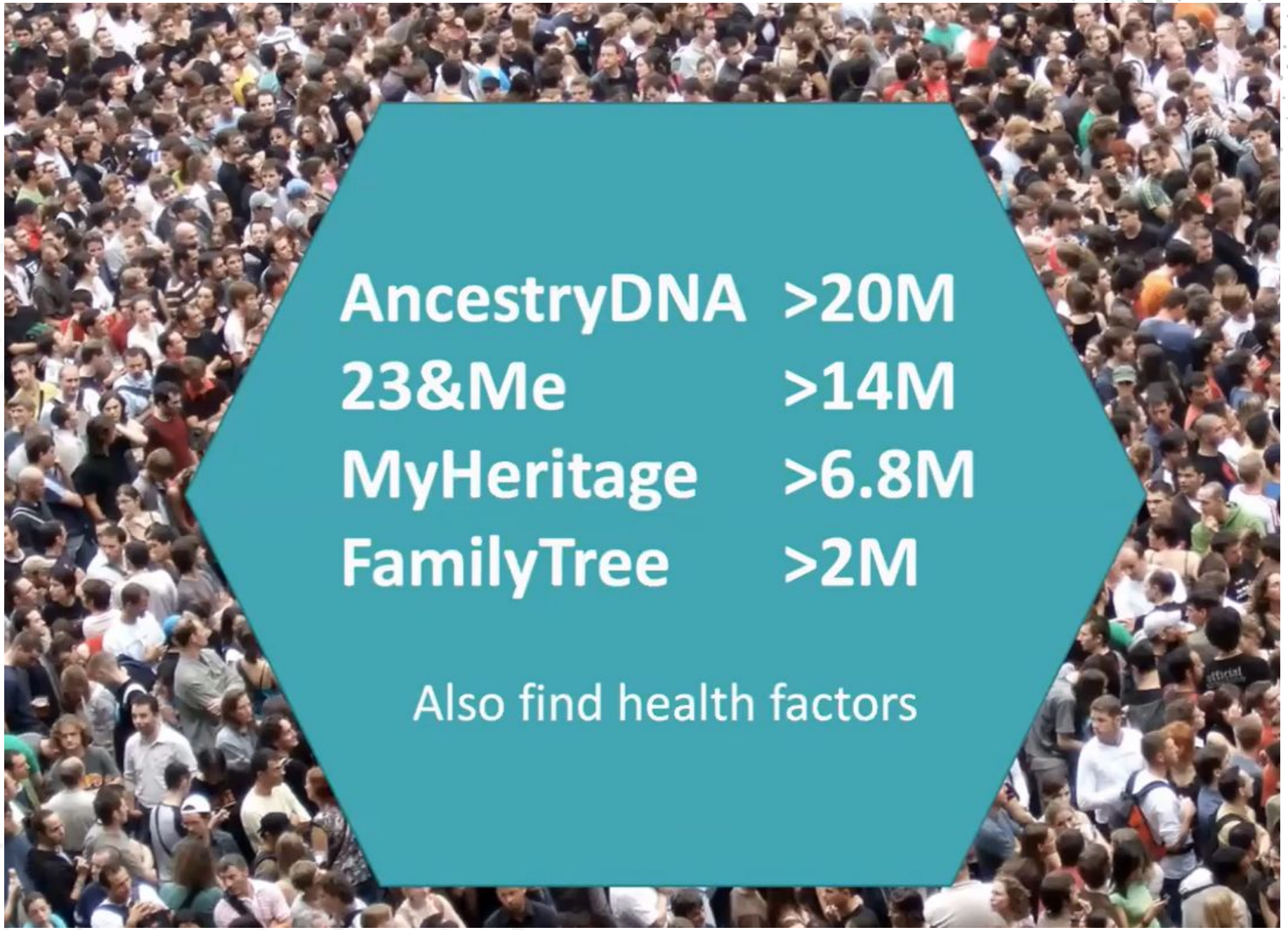
human reproduction open | ESHRE PAGES

Good practice recommendations for information provision for those involved in reproductive donation†

ESHRE Working Group on Reproductive Donation, Jackson Kirkman-Brown [1,*], Carlos Calhaz-Jorge[2], Eline A.F. Dancet[3], Kersti Lundin[4], Mariana Martins [5], Kelly Tilleman[6], Petra Thorn[7], Nathalie Vermeulen [8], and Lucy Frith [9]

Recommendations

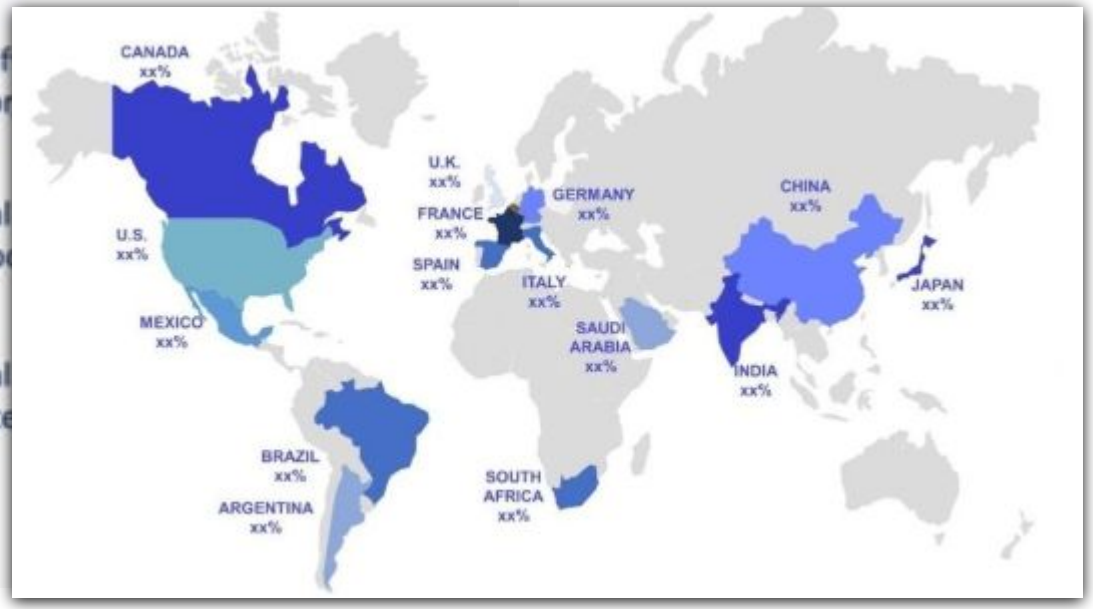
- Donor-conceived offspring requesting information should be informed about what information they are able to access from the authorities and/or MAR centre/gamete bank in their jurisdiction.
- Donor-conceived offspring should be informed about any donor registries in their country and how these function.
- Donor-conceived offspring should be informed that legislation allowing donor anonymity may change prospectively and retrospectively.
- Donor-conceived offspring born after the lifting of anonymity should be informed from an early age about the type and content of information which they can receive and at what age they are able to access it (this will vary across jurisdictions see above).
- Besides being informed about the relevant regulations/legislation on the maximum number of same-donor offspring/families that they could be genetically related to, donor-conceived offspring should be informed that there is no guarantee that this number will not be surpassed.


AncestryDNA >20M
23&Me >14M
MyHeritage >6.8M
FamilyTree >2M
Also find health factors

Direct-to-consumer genetic testing

Direct-to-consumer genetic testing
People submit DNA to find information about their origin. Testing can:

- Identif
  (donor
- Reveal
  the so
- Reveal
  donate

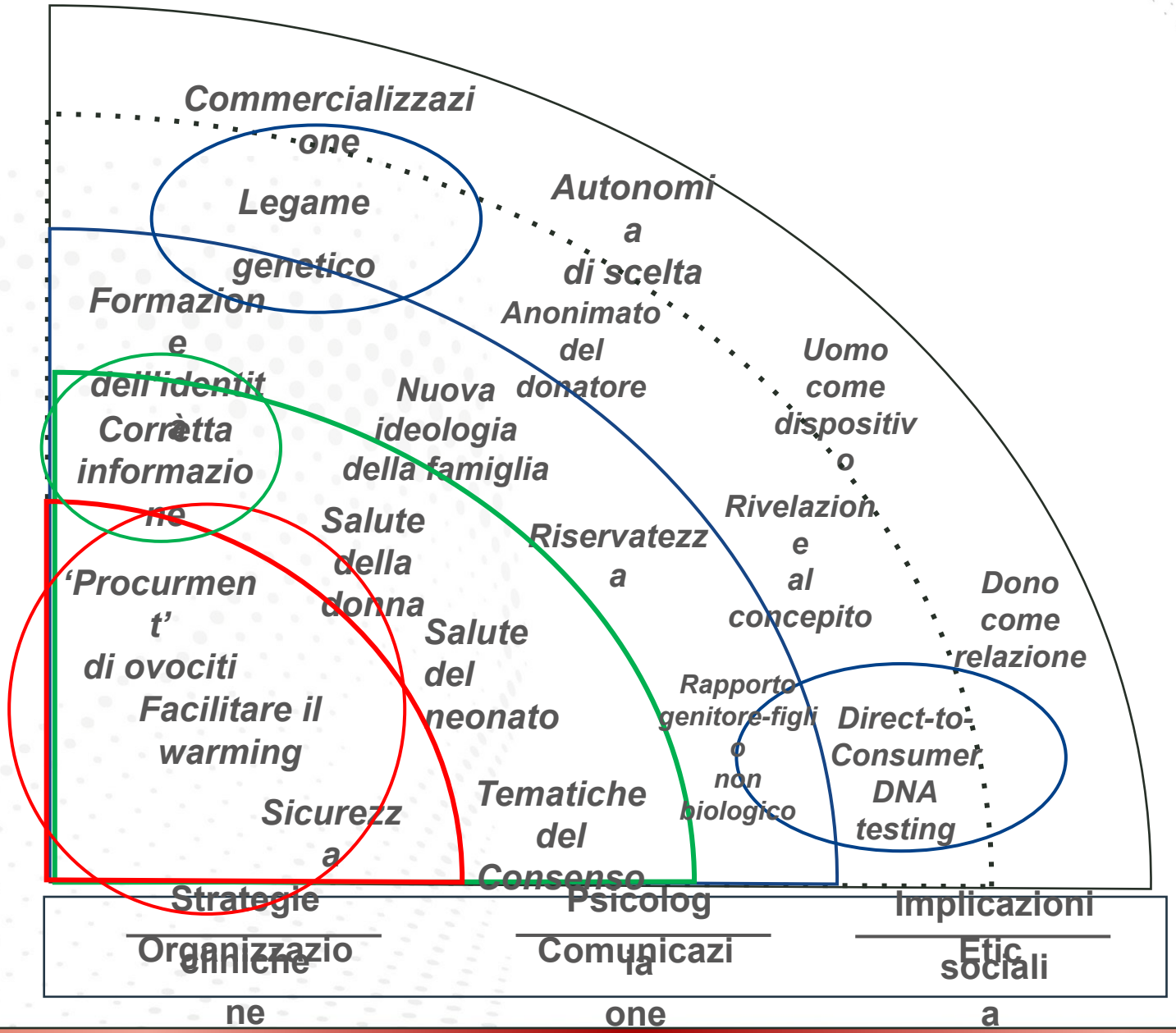


European Society of Human Reproduction and Embryology

A 118 American anonymous sperm donors showed 40.6% had sent their genetic material to a direct-to-consumer DNA database.

(Klipstein et al., 2020)

L’impatto dell’ovodonazione a vari livelli



Geni versus bambini

Human Reproduction, Vol.35, No.1, pp. 5–11, 2020
Advance Access Publication on January 9, 2020 doi:10.1093/humrep/dez256

human reproduction OPINION

‘Genes versus children’: if the goal is parenthood, are we using the optimal approach?

Jackson C. Kirkman-Brown[1,2,*], and Mariana V. Martins[3,4]

Patients may also have concepts that attribute more properties to these genetic variants, in terms of the day-to-day physiology and psychology of their child, than evidence supports.

……..individuals may have **>4 million** differences compared with the reference genome, with ~2000 of these associated with complex traits, >25 of which may have negative disease implications. This sounds like an incredible amount of unique difference.

Human Reproduction, Vol.35, No.4, pp. 1006–1007, 2020
doi:10.1093/humrep/deaa023

human reproduction LETTER TO THE EDITOR

An ethical perspective on ‘Genes versus children’

Segers and Pennings

……..respecting autonomous choice is an important aspect of allowing individuals to pursue their conception of a good life. Unreflectively answering someone’s call for support to satisfy the desire for a genetically related child by saying that he or she could just as well look for a non-genetic parenthood alternative would be a failure to respect that person’s autonomy

……the possibility of significantly altering socioreproductive understandings of the importance of genetic ties should not be underestimated

Kirkman-Brown JC, Martins MV. 'Genes versus children': if the goal is parenthood, are we using the optimal approach? Hum Reprod. 2020
Segers S, Pennings G. An ethical perspective on 'Genes versus children'. Hum Reprod. 2020

Open problems in human trait genetics

4	**Rare variants**	Most genetic studies of complex traits deal only with common variants, even though the strongest effects are expected in rare variants. In aggregate, they may contribute substantially to heritability. Key challenges are lack of statistical power and genotyping.	
	Heritability estimate interpretation	It is not entirely clear what the "correct" way to define and measure heritability is and how heritability estimates should be interpreted.	
3	**Gene-environment interactions (GxE)**	Genetic effects may be contingent on environmental conditions. Such interactions are difficult to discover, and their overall contribution to phenotypic variance is not clear. Substantial GxE interactions would also undermine many methods.	
11	**Missing heritability**	This is a classic problem, asking why detected associations explain only a small part of the heritability in most complex traits, and why there is a large gap between heritability estimates obtained from SNP-based and twin-based methods. Despite a lot of progress in suggesting solutions and collecting evidence, the problem is still not fully resolved.	As long as this is not fully resolved, there are lingering doubts that our understanding of genetic effects is flawed in some fundamental way.

Brandes N, Weissbrod O, Linial M. Open problems in human trait genetics. Genome Biol. 2022 Jun 20;23(1):131.

Il legame genetico:il punto di vista dei pazienti

Table III Preference for genetic over non-genetic parenthood.

Genetic parenthood for respondent or partner	Preference for genetic over non-genetic parenthood Response options	Women *n* (%)	Men *n* (%)
Genetic parenthood for respondent him/herself	Crucial: I only want a child that is genetically mine	31/104 (**30**%)	38/91 (**42**%)
	Important: I do not think I would want a child that is not genetically mine	33/104 (**32**%)	28/91 (**31**%)
	Preferable, but genetic parenthood would not be possible, I would also consider having a child that is not genetically my own	37/104 (**36**%)	24/91 (**26**%)
	Not important: I do not care if my child is genetically my own	3/104 (**3**%)	1/91 (**1**%)
Genetic parenthood for the respondents' partner	Crucial: I only want a child that is genetically his/hers	37/104 (**36**%)	46/90 (**51**%)
	Important: I do not think I would want a child that is not genetically his/hers	33/104 (**32**%)	23/90 (**26**%)
	Preferable, but genetic parenthood would not be possible, I would also consider having a child that is not genetically his/hers	31/104 (**30**%)	20/90 (**22**%)
	Not important: I do not care if my child is genetically his/hers	3/104 (**3**%)	1/90 (**1**%)

Human Reproduction, Vol.39, No.10 pp. 2076–2087, 2017
Advanced Access publication on August 23, 2017 doi:10.1093/humrep/dex256

human reproduction ORIGINAL ARTICLE *Psychology and counselling*

The importance of genetic parenthood for infertile men and women

S. Hendriks[1], K. Peeraer[2], H. Bos[3], S. Repping[1], and E.A.F. Dancet[1,4,5,*]

Hendriks S, van Wely M, D'Hooghe TM, Meissner A, Mol F, Peeraer K, Repping S, Dancet EAF. The relative importance of genetic parenthood. Reprod Biomed Online. 2019

- N=173 pazienti con infertilità severa
- N=111 ginecologi

RBMO

ELSEVIER

ARTICLE

The relative importance of genetic parenthood

BIOGRAPHY

Saskia Hendriks is a postdoctoral fellow in the Department of Bioethics of the National Institutes of Health Clinical Center. She obtained her MD-PhD in 2017 at the University of Amsterdam. Her research focuses on the ethical, legal and societal implications of emerging technologies.

Saskia Hendriks[1,2], Madelon van Wely[1], Thomas M. D'Hooghe[3], Andreas Meissner[1], Femke Mol[1], Karen Peeraer[4], Sjoerd Repping[1,*], Eline A.F. Dancet[1,3]

TABLE 1 KEY TREATMENT CHARACTERISTICS AND LEVELS

Treatment characteristic	*Levels*
Genetic parenthood	Neither of both partners, only fertile partner, both partners
Child health[a]	3%, 5%, 10%, 20%
Maternal health	No risk, 5% risk of severe ovarian hyperstimulation syndrome[b], 5% risk of developing cancer within 15 years
Pregnancy rate	2%, 5%, 20%, 35%
Curing infertility	Single pregnancy as treatment goal, curing infertility as treatment goal, i.e. leading to the ability to autonomously achieve one or more pregnancies
Costs[c]	€0, €4000, €10,000

[a] Specified as risks on major congenital abnormalities that effect functioning, require surgical intervention, or both (*Eurocat, 2014*).

[b] Specified as complication that requires hospitalization.

[c] Specified as costs covered by national health insurance.

TABLE 2 EXAMPLE FROM THE QUESTIONNAIRE DISPLAYING A CHOICE BETWEEN TWO HYPOTHETICAL TREATMENT OPTIONS

	Treatment A	*Treatment B*
Genetic parenthood	Genetic parenthood for both parents	Genetic parenthood for both parents
Risk of a severe birth defect[a]	10%	20%
Risk of severe complications for the prospective mother	None	5% chance of developing cancer within 15 years as a result of the treatment
Chance of getting pregnant (per attempt[b])	2%	20%
Single pregnancy or curing infertility	The goal of this treatment is to achieve a single pregnancy	The goal of this treatment is to cure infertility, after the treatment couples can try to get pregnant at home every month
Costs that are covered by health insurance (per attempt[b])	€0	€4000
I prefer:	☐ A	☐ B

Hendriks S, van Wely M, D'Hooghe TM, Meissner A, Mol F, Peeraer K, Repping S, Dancet EAF. The relative importance of genetic parenthood. Reprod Biomed Online. 2019

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Fertility patients switch to a treatment resulting in non-genetic parenthood -

- Child health risk reduction of 3.6%
- Cost reduction of 3,500 Euros
- Ovarian hyperstimulation syndrome risk reduction of 4.6%
- Maternal cancer risk reduction of 2.7%
- Pregnancy rate increase of 18%

TABLE 5 THE CHANGE IN OTHER TREATMENT CHARACTERISTICS FOR WHICH RESPONDENTS ARE WILLING TO TRADE GENETIC PARENTHOOD FOR NON-GENETIC PARENTHOOD

Treatment characteristic	*Trade off (95% CI[a])*	
	Patients	***Gynaecologists***
Child risks	–3.6% (–5.3% to 1.4%)	–2.8% (–4.3% to –1.3%)
Costs	€–3500 (€-5550 to €1450)	€–2400 (€–4850 to €–950)
Maternal risks		
Severe ovarian hyperstimulation syndrome	–4.6% (–6.3% to –2.9%)	–4.3% (–6.4% to –2.2%)
Developing cancer	–2.7% (–5.3% to –0.6%)	–2.8% (–4.6% to –1.0%)
Pregnancy rate	+18% (8% to 28%)	+19% (7% to 31%)

Genetic parenthood for both parents is compared with genetic parenthood for neither of both parents

[a] Confidence interval based on the Krinsky Robb method adjusted for class probabilities.

Hendriks S, van Wely M, D'Hooghe TM, Meissner A, Mol F, Peeraer K, Repping S, Dancet EAF. The relative importance of genetic parenthood. Reprod Biomed Online. 2019

Conclusioni: cosa è cambiato…

- Le strategie di recupero e congelamento di ovociti
- La comunicazione

- La percezione del legame genetico?

investigation of the value of the genetic link between parents and children is one of the greatest challenges for the future of ART

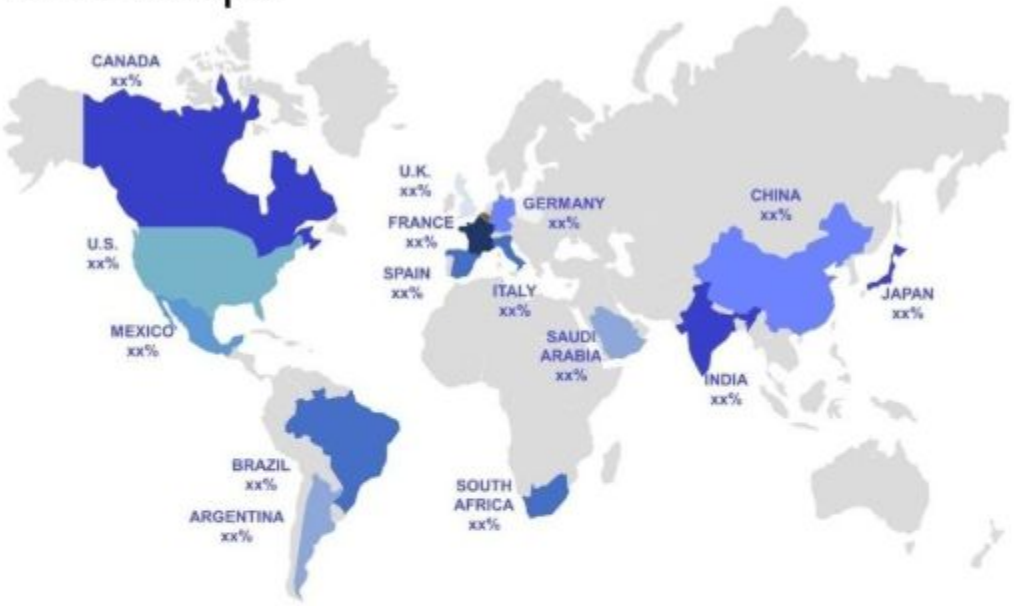
Segers and Pennings

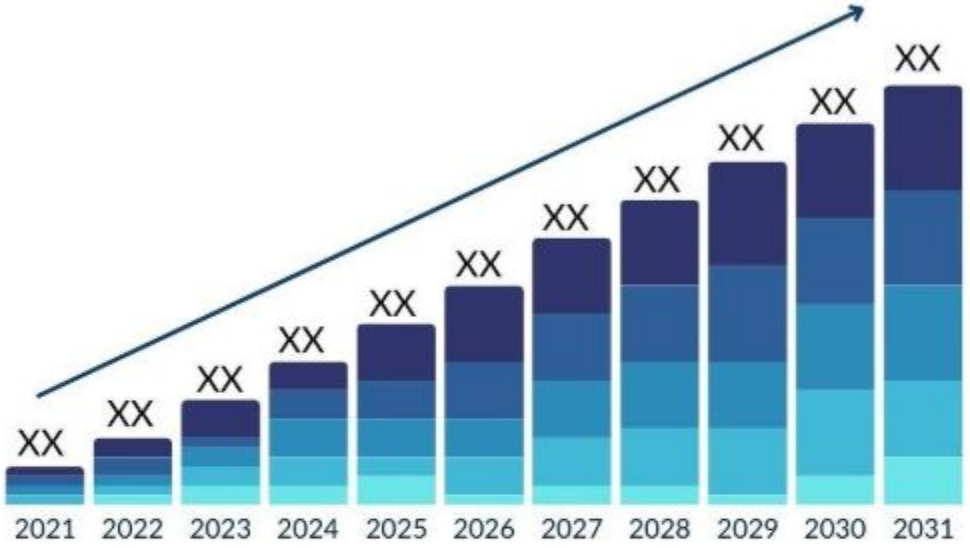
Bellagio, Como Lake, Italy

Grazie!

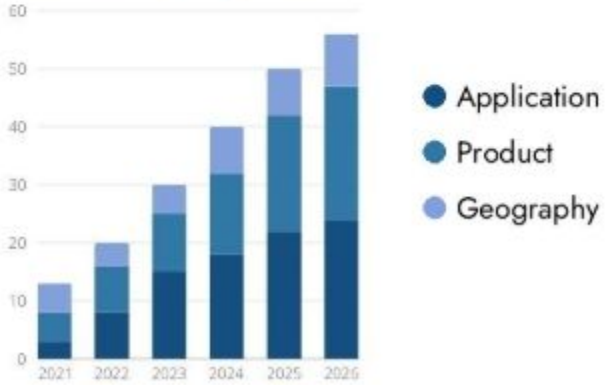
Bellagio, Como Lake, Italy

Global Direct To Consumer Dtc Genetic Testing Market Size and Scope

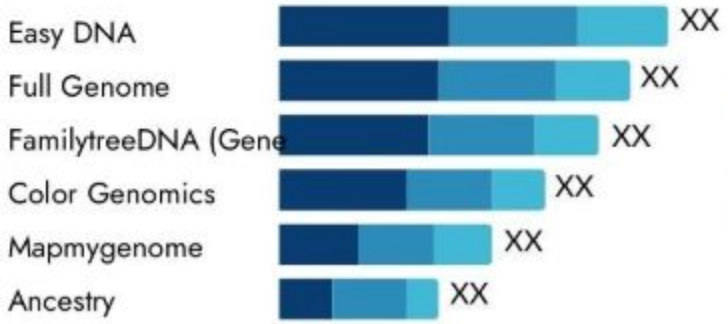




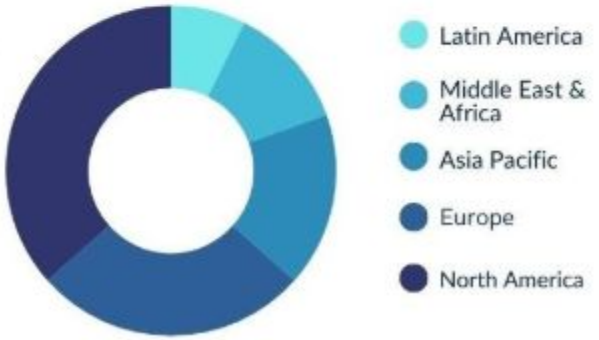
Market Segmentation



Top Key Players



Regional Analysis



Source : www.marketresearchintellect.com