Center for Transgender Health
University Hospital Münster

Year in Review: Reproductive Health

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EPATH 4-6 SEPTEMBER 2025 HAMBURG, GERMANY

From the 1st of May 2023 until August 2025.

<u>Key words:</u>
Reproductive health
Fertility counselling
Fertility preservation
Child wish in transgender

In persons assigned male or female at birth and gender diverse persons

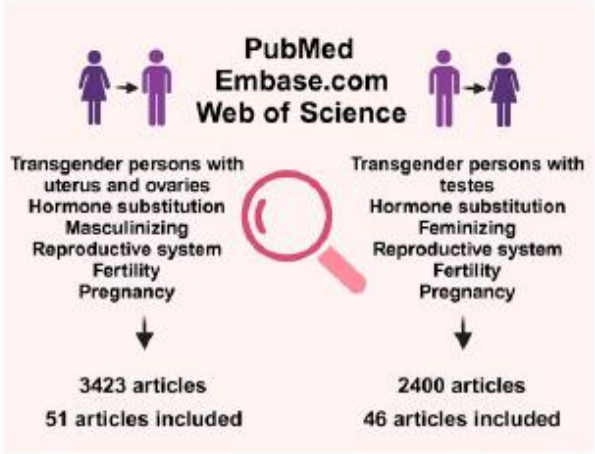
Review of fertility preservation

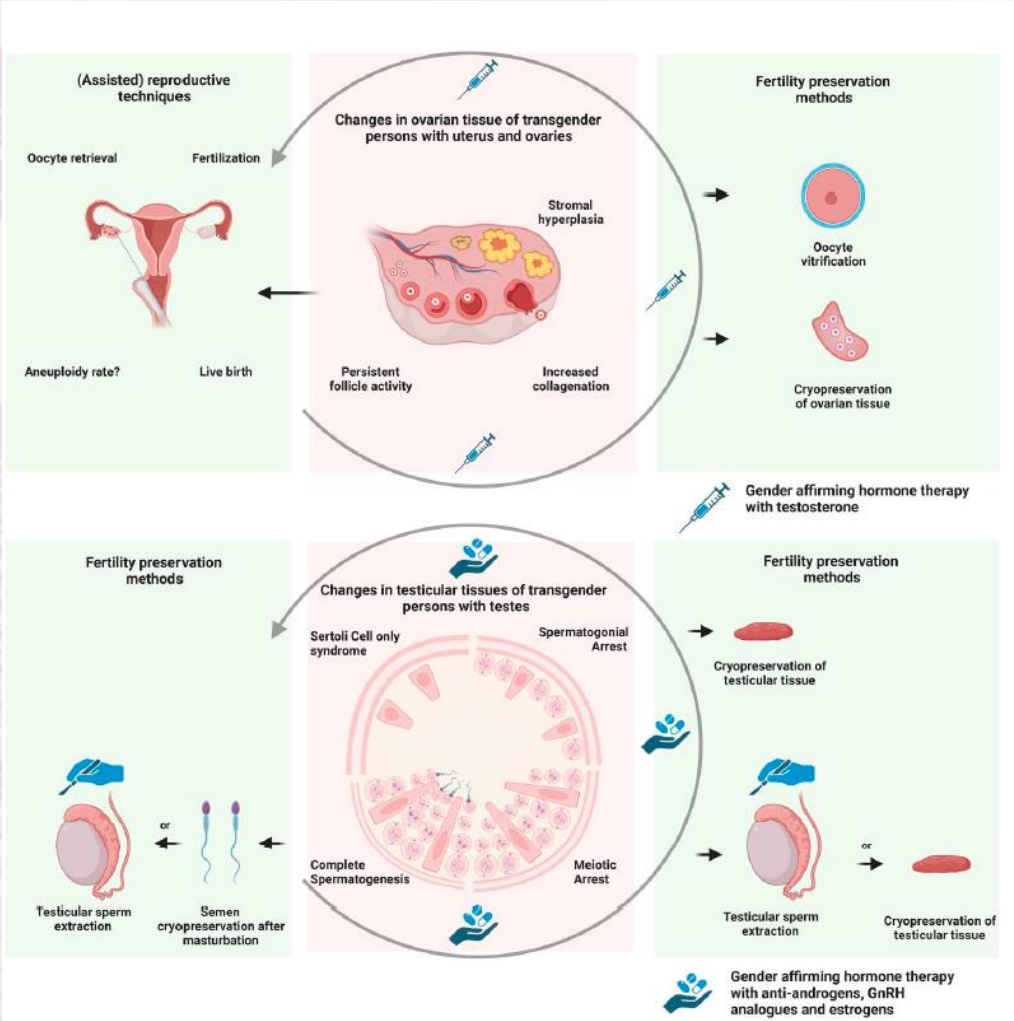
OXFORD human reproduction update

Human Reproduction Update, 2025, 00(0), 1–35
https://doi.org/10.1093/humupd/dmae036

Fertility in transgender and gender diverse people: systematic review of the effects of gender-affirming hormones on reproductive organs and fertility

C. De Roo [1,2,3,†,*], F. Schneider [4,†], T.H.R. Stolk [5,6,7], W.L.J. van Vugt [5,6,7], D. Stoop [1,2,‡], and N.M. van Mello [5,6,7,‡]





Overview

Fertility Preservation

Barriers

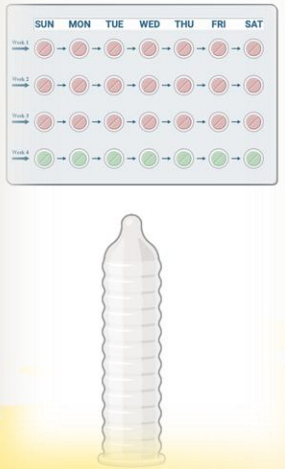
Decisional regret

Adolescents

Animal studies

Adults

Animal studies



Contraception

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Fertility Preservation

Women's Health Issues 35-2 (2025) 74–82

ELSEVIER

WOMEN'S HEALTH ISSUES

www.whijournal.com

Policy Matters

Fertility Intentions and Histories Among Transgender Adults Who Started Gender-Affirming Testosterone Before Adulthood

Elizabeth R. Boskey, PhD, MPH, MSSW[a,b,*], Emile Redwood, MD[c,d], Til Parsa, MD[e], Frances W. Grimstad, MS, MD[a,f]

At what age did you start T(estosterone)?	
13	1 (1)
14	2 (2)
15	13 (10)
16	18 (14)
17	23 (18)
18	62 (50)
No answer	6 (5)

	Mean (Standard Deviation) [Range]
Time on testosterone in years	5.9 (3.9) [.25–24]
Age at survey	23 (4) [18–42]

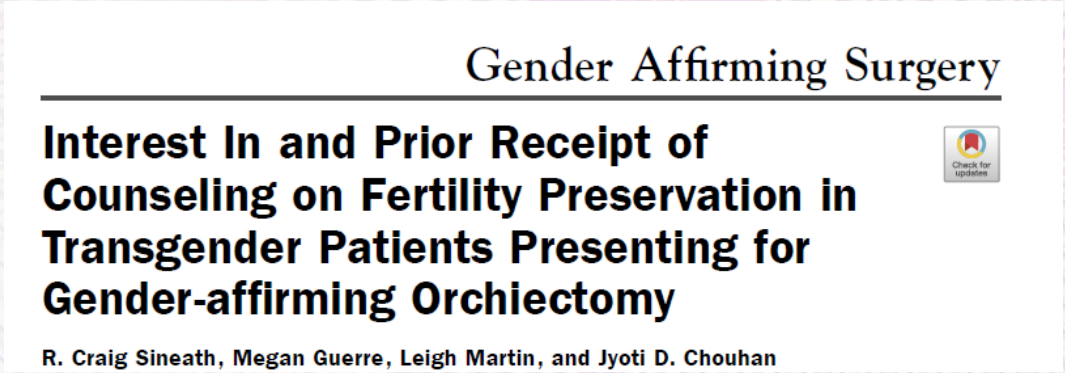
125 individuals born with a uterus and ovaries in the US.

22 % did not want children
47% wanted children but did not think a genetic relationship was important
8% indicated having genetically related children was important and 17% indicated they did not know.

Only 47% recalled counseling about fertility preservation.

Significantly more people in the group who might want genetically related children still had one or both ovaries, desired to carry a pregnancy in the future or were unsure and either desired to use their eggs for genetically related children or were unsure.

Fertility Preservation



Gender Affirming Surgery

Interest In and Prior Receipt of Counseling on Fertility Preservation in Transgender Patients Presenting for Gender-affirming Orchiectomy

R. Craig Sineath, Megan Guerre, Leigh Martin, and Jyoti D. Chouhan

Retrospective chart review.

Evaluation of patients seeking gender-affirming bilateral orchiectomy.

The cohort included 78 patients with testicular tissue.

22% (n = 17) indicated reproductive options were not discussed prior to surgical consultation.

85% (n = 66) were not interested in fertility preservation.

Reasons: No interest in biological children (74%), not wanting to delay transition (47%), and cost (36%).

Patients who were married or in long-term relationships had a higher interest in fertility preservation compared to patients who were not in long-term relationships.

Fertility Preservation

Original Article

An Intervention to Increase Fertility Preservation Counseling Prior to Starting Gender-Affirming Hormone Therapy

Check for updates

Allison Pierce, BS[1], Marissa Holden, MD[1,2], An Pham, MD MPH[3], Richard Lucidi, MD[1], Erika P. New, MD[1,*]

[1] Department of Obstetrics and Gynecology, Virginia Commonwealth University, Richmond, Virginia
[2] Department of Obstetrics and Gynecology, Cedars-Sinai Medical Center, Los Angeles, California
[3] Department of Pediatrics, Virginia Commonwealth University, Richmond, Virginia

A retrospective observational pre/post intervention study.

A single academic gender-affirming care clinic.

From January 2022 to January 2023 and April 2023 to April 2024.

There were 208 eligible patients, with 143 in the pre-intervention group and 65 in the post-intervention group.

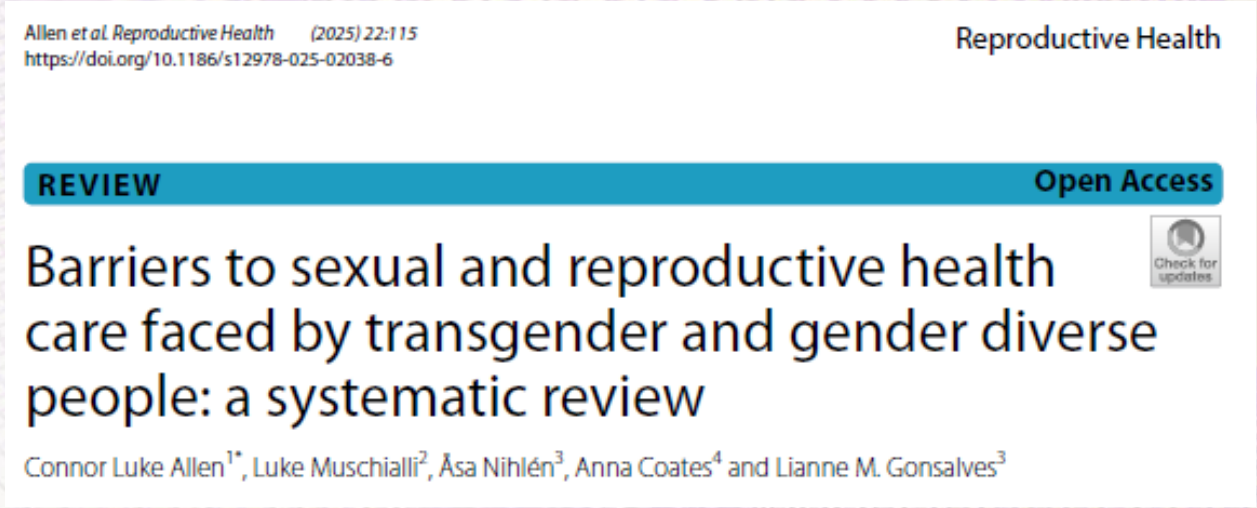
There was a significant increase in fertility preservation counseling rates after implementing the educational handout.

But there was no significant difference in referral rates or in gamete cryopreservation.

Counseling Rates.

	Pre-intervention	Post-Intervention	Percentage Change (%)	Standard Error	*P*-Value
Total # of eligible patients	143	65			
Patients Counseled on FP options	45 (31.5)	38 (58.46)	26.9	7.3	.0002*
Patients not Counseled on FP options	98 (68.5)	27 (41.5)			
Patients referred to REI	5 (11.1)	3 (7.9)	−3.2	6.5	.6208†
Patients who underwent FP procedure	1 (2.2)	0			

Fertility Preservation – barriers



Allen et al. Reproductive Health (2025) 22:115
https://doi.org/10.1186/s12978-025-02038-6

Reproductive Health

REVIEW Open Access

Barriers to sexual and reproductive health care faced by transgender and gender diverse people: a systematic review

Connor Luke Allen[1*], Luke Muschialli[2], Åsa Nihlén[3], Anna Coates[4] and Lianne M. Gonsalves[3]

53 studies included.

49 studies were included in high-income countries.

Participants included for analysis ranged in age from 18 to 78 years.

Barriers were:

Financial accessibility

Lack of provider knowledge and education

Limited information availability

Systemic and interpersonal discrimination

Cis-normative and gender biased health system practices

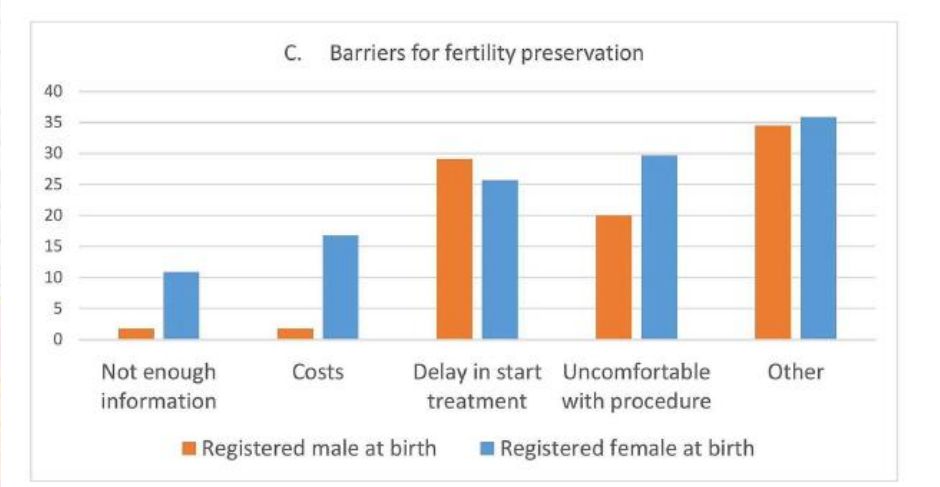
Dysphoria associated with treatments and procedures.

Fertility Preservation – barriers

The Journal of Sexual Medicine, 2025, **22**, 924–936
https://doi.org/10.1093/jsxmed/qdaf029
Advance access publication date 7 March 2025
Original Research

The attitudes of transgender and gender-diverse adolescents and their parents regarding fertility, parenthood, and fertility preservation before the start of puberty suppression or gender-affirming hormone therapy

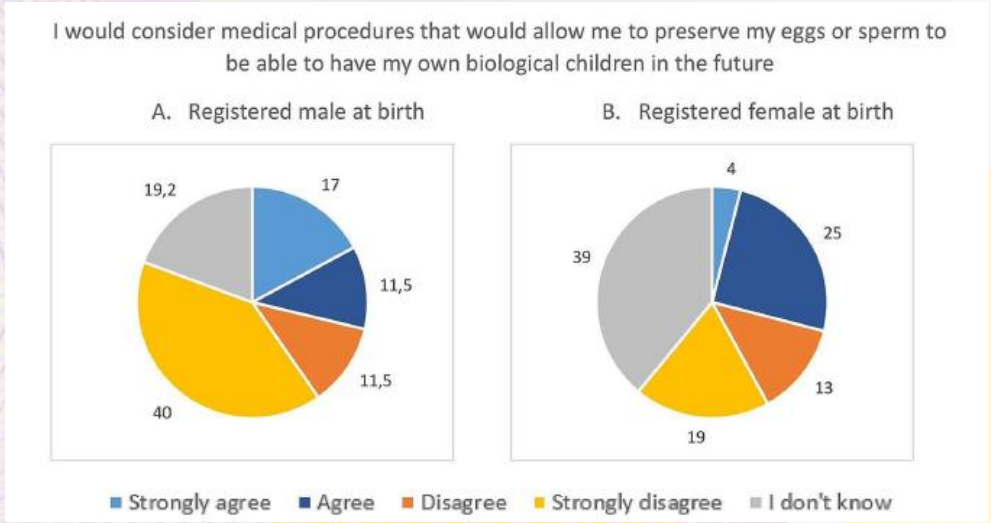
Tessa H.R. Stolk, MD[1,2,3,*], Norah M. van Mello, MD, PhD[1,2,3], Lidewij S. Boogers, MD[1], Andreas Meißner, MD, PhD[1,2,3,4], Judith A.F. Huirne, MD, PhD[2,3], Alessandra D. Fisher, MD, PhD[5], Silvia Ciancia, MD[6,7], Daniel Klink, MD, PhD[6], Martine Cools, MD, PhD[6,7], Sabine E. Hannema, MD, PhD[1,3,8,9], Emmy van den Boogaard, MD, PhD[1,2,3]



Adolescents under 18 starting puberty suppression or gender-affirming hormone therapy. 316 adolescents.

Between November 2021 and March 2024 in Amsterdam, Ghent and Florence.

Prospective study using 2 questionnaires (Transgender Youth Fertility Attitudes Questionnaire, Decision Conflict Scale)



Year in Review: Reproductive Health
Dr. Florian Schneider, Münster

EPATH 4-6 SEPTEMBER 2025 HAMBURG, GERMANY

Fertility Preservation – barriers

Transgender Health
Volume 9, Number 4, 2024
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DOI: 10.1089/trgh.2022.0135

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ORIGINAL ARTICLE

Reflecting on the Importance of Family Building and Fertility Preservation: Transgender People's Experiences with Starting Gender-Affirming Treatment as an Adolescent

Iris de Nie,[1–4,†] Joyce D. Asseler,[2–4,*,†] Marijn Arnoldussen,[2,5] Silke Baas,[2,‡] Annelou L.C. de Vries,[2,5] Judith A.F. Huirne,[3,4] Thomas D. Steensma,[2,6] Martin den Heijer,[1,2] and Norah M. van Mello[2–4]

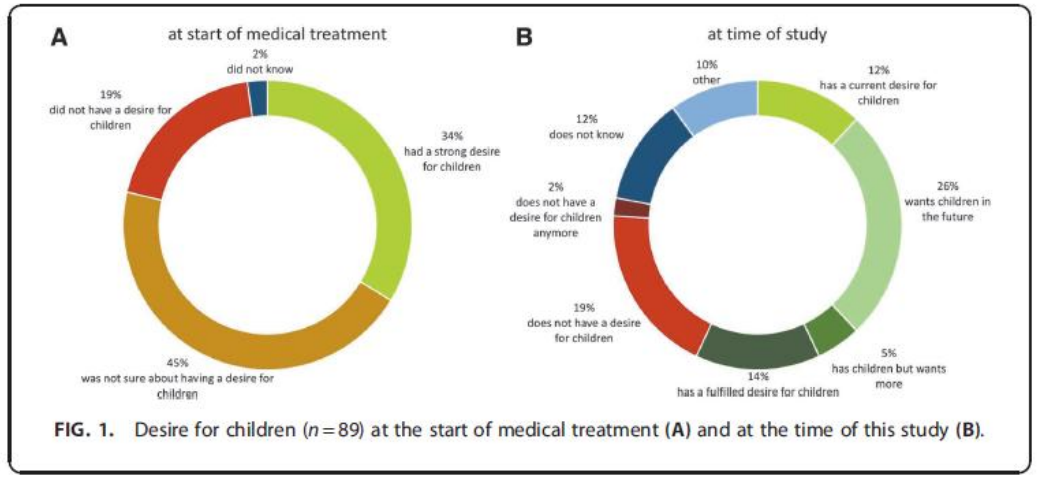


FIG. 1. Desire for children ($n = 89$) at the start of medical treatment (**A**) and at the time of this study (**B**).

89 participants

66 TGD people assigned female at birth (AFAB) and 23 TGD people assigned male at birth (AMAB).

Mean age of 32.4 years (range 25.5–51.2) at the time of study, and 15.6 years (range 11.5–20.6) at the start of medical treatment.

With today's knowledge, 44% of TGD people AFAB and 35% of TGD people born AMAB would pursue fertility preservation.

Fertility Preservation – decisional regret

ORIGINAL ARTICLE: FERTILITY PRESERVATION

Check for updates

Fertility preservation choices and decisional regret after gender-affirming surgery in transgender men or gender nonbinary persons

Austin Johnson, M.D.,[a] Asha B. McClurg, M.D., M.S.C.R.,[b] Janine Baldino, M.D.,[b] Rajeshree Das, B.A.,[c] and Erin T. Carey, M.D., M.S.C.R.[b]

[a] Department of Obstetrics and Gynecology, University of Washington, Seattle, Washington; [b] Department of Obstetrics and Gynecology, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina; [c] University of North Carolina at Chapel Hill, Chapel Hill, North Carolina

University-based practice, cross-sectional.

57 survey respondents (transgender men or non-binary) with a history of gender-affirming surgery.

Decisional regret is expierenced.

Decisional regret regarding preoperative fertility preservation and family-building choices after gender-affirming surgery as well as the removal of reproductive organs.

Decisional regret scale[a]	No. (%, median score [IQR], range)
No regret	35 (61.4, 0, 0)
Mild regret	13 (22.8, 10.8 [5–15], 5–20)
Moderate-to-severe regret	9 (15.8, 50 [40–55], 25–85)

Note: IQR = interquartile range.
[a] Score 0 = no regret, 1–24 = mild regret, ≥25 = moderate-to-severe regret

Johnson. Fertility preservation regret after GAS. Fertil Steril Rep 2024.

Fertility Preservation – decisional regret

Journal of Assisted Reproduction and Genetics (2024) 41:1077–1085
https://doi.org/10.1007/s10815-023-03013-5

FERTILITY PRESERVATION

Decision regret, and other mental health outcomes, following fertility preservation in the transgender individual compared to the cisgender woman

Viji Sundaram[1] · Brett Stark[2] · Eleni Jaswa[2] · Joseph Letourneau[3] · Evelyn Mok-Lin[2]

Table 1 Demographics of birth-assigned female versus male respondents. GAT = gender affirming treatment (medical); GAS = gender affirming surgery

	Assigned female at birth (*N* = 16)	Assigned male at birth (*N* = 13)
Mean age (years, range)	25.5 (15.4–39.9)	31.2 (21.8–47.04)
Ethnicity		
African-American	2	0
Asian	7	3
Caucasian	11	8
Hispanic	0	2
Multiracial	5	0
Education (%)		
Some college or less	11 (69%)	4 (31%)
College graduate	0	6 (46%)
Post graduate	5	2 (15%)
Had partner	9 (56%)	8 (62%)
Married (%)	3 (19%)	4 (31%)
Had history of GAT	13 (81%)	13 (100%)
Had GAS	11 (69%)	7 (54%)
Ever sexually active	12 (75%)	10 (77%)
Had Fert Pres	10 (63%)	12 (92%)

16 AFAB and 13 AMAB undergoing FP consultation in the USA.

Between 2016 and November 2019.

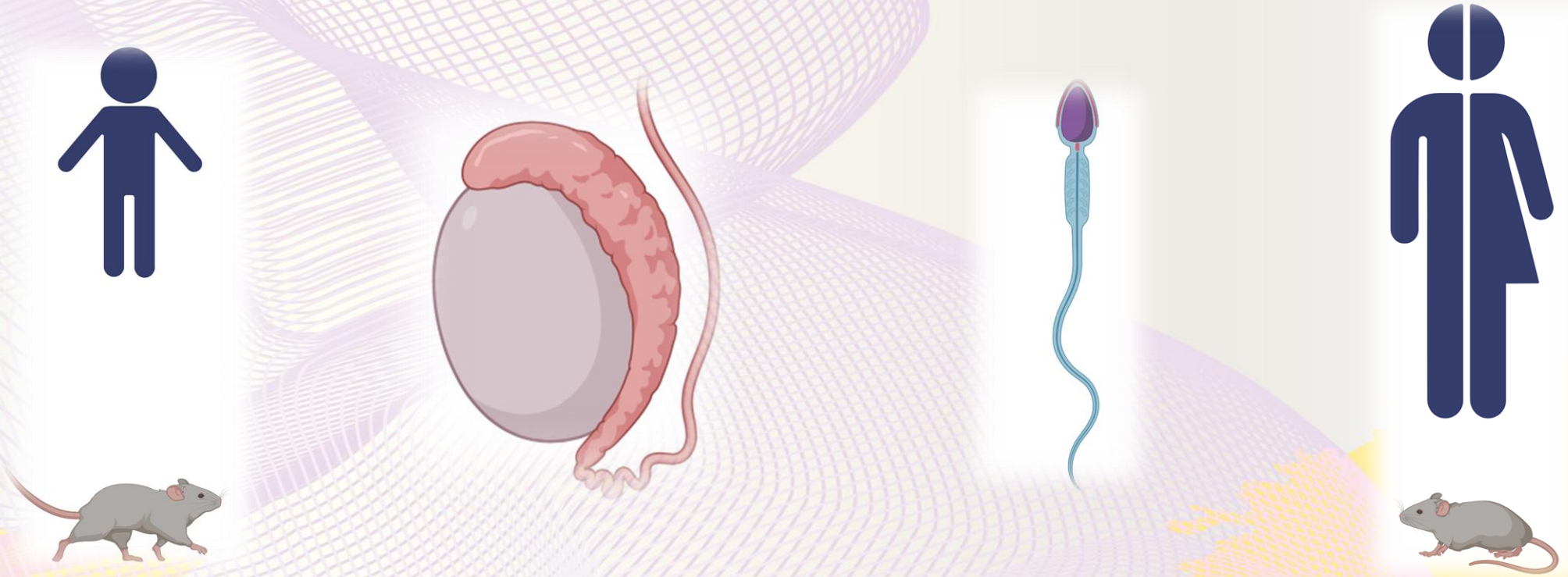
They were compared to each other and to cisgender cohorts (women undergoing elective oocyte cryopreservation (EOC) and 44 with cancer). Outcomes included demographics; validated scales for depression, anxiety, body image, QOL (see below) in the trans cohort.

Of 29 transgender individuals participating, 10 AFAB (62%) and 12 AMAB (92%) underwent fertility preservation.

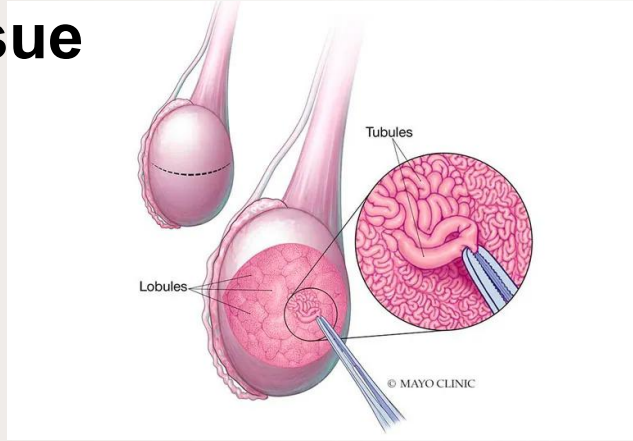
On univariate modeling, regret was significantly lower in transpeople undergoing FP compared to those who did not (OR 0.118, $p = 0.03$).

AFAB and AMAB transpatients undergoing FP reported on the decision regret scale median scores 5 (mean 9) and 7.5 (mean 15).

Persons with testicular tissue



Fertility Preservation – persons with testicular tissue



Between December 2022 and May 2023.

6 adolescents and 10 parents.

Semi-structured interviews.

Communication between parents, patient and health care provider is key.

Even though TESE is a surgical procedure with possible complications and pain afterwards, this alternative seemed less dysphoric to the participants.

OXFORD human reproduction

Human Reproduction, 2024, 00(0), 1–13
https://doi.org/10.1093/humrep/deae200
Original Article

Psychology and counselling

The experience of transfeminine adolescents and their parents regarding fertility preservation via testicular sperm extraction (TESE): a qualitative study

T.H.R. Stolk [1,2,3,*], N.M. van Mello[1,2,3], A. Meißner[1,2,3,4,5], J.A.F. Huirne[2,3], and E. van den Boogaard[1,2,3]

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[3]Amsterdam Reproduction and Development, Amsterdam, The Netherlands
[4]Department of Obstetrics & Gynaecology, Centre for Reproductive Medicine, Amsterdam UMC, Amsterdam, The Netherlands
[5]Department of Urology, Amsterdam UMC, University of Amsterdam, Amsterdam, The Netherlands

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Fertility Preservation – semen parameters

Journal of the Endocrine Society, 2025, 9, bvaf105
https://doi.org/10.1210/jendso/bvaf105
Advance access publication 10 June 2025
Clinical Research Article

Semen Cryopreservation and Semen Quality in Transfeminine Adolescents Prior to Hormone Therapy

Mohsin Aslam,[1,2] Pernille Badsberg Norup,[1,2] Mette Ewers Haahr,[3,4] Anne Katrine Pagsberg,[4,5] Annamaria Giraldi,[3,4] Niels Jørgensen,[1,2] and Katharina Maria Main[1,2,4]

Table 1. Population characteristics

	Opting for semen cryopreservation			Opting out of semen cryopreservation			*P* value[a]
	n	median	(range)	*n*	median	(range)	
Age at first counseling on semen cryopreservation (years)	23	16.4	(13.7-19.4)	32	15.8	(11.7-17.9)	< .05
Age at initiation of hormone therapy (years)	22	16.8	(14.1-19.5)	32	15.9	(12.0-17.9)	< .05
Tanner stage[b] (G)	5	5.0	(4-5)	9	3	(2-4)	< .05
Left testis volume (mL)	6	20.0	(15-25)	9	8	(3-20)	< .05
Right testis volume (mL)	6	20.0	(15-25)	9	8	(4-20)	< .05
BMI[c]	20	20.0	(15.0-31.3)	31	19.9	(16.0-37.0)	.83
BMI SDS[d]	20	−0.4	(−3.2-2.6)	31	−0.1	(−1.1-4.1)	.24
Self-medication or prior GAHT[e]	3	NA	NA	3	NA	NA	NA
Collected a semen sample at the department	20	NA	NA	NA	NA	NA	NA
Collected a sample at a private sperm bank	3	NA	NA	NA	NA	NA	NA

[a]*P* value: Mann-Whitney U test.
[b]Clinical assessment a.m. Tanner [29].
[c]Body mass index.
[d]Body mass index standard deviation scores for age and registered sex at birth in a Danish reference population [27].
[e]Gender-affirming hormone therapy.

58 included, 23 chose to provide a semen sample.

Reproductive hormones were within normal ranges for age and registered sex at birth. But semen quality was impaired.

	Semen samples collected at the department ($n = 17$)		
	n	median	(range)
Age at sample collection (years)	17	16.8	(14.1-19.5)
Samples per person	17	2.0	(1-7)
Semen volume (mL)	17	1.8	(0.2-3.9)
Sperm concentration (10^6/mL)	14	11.1	(0.02-163.00)
Total sperm count (10^6)	14	17.8	(0.1-214.2)
Progressive motile spermatozoa (%)	15	46.0	(8.0-74.0)
Non-progressive motile spermatozoa (%)	15	9.0	(6.0-31.0)
Immotile spermatozoa (%)	15	43.0	(20.0-78.0)
Total motile spermatozoa (%)	15	57.0	(22.0-80.0)
Samples with azoospermia	0	NA	NA

Semen parameters of the initial semen sample for each individual with no history of prior self-medication or gender-affirming hormone therapy.

Fertility Preservation – semen parameters

Endocrine Practice 30 (2024) 356–359

AACE Endocrine Practice™ www.endocrinepractice.org

Original Article

Pubertal Status at the Time of Fertility Preservation in Transgender Girls

Mabel Yau, MD [1, 2, *], Neha R. Malhotra, MD [3], John Steever, MD [4], Eva Baldisserotto, CPNP-PC [3], Cathy Lin, MS [2], Ralph Fader, MD [1, 5], Matthew Oransky, PhD [1], Joshua D. Safer, MD [1, 6]

Table 2
Clinical Features in Subjects Who Successfully Completed Sperm Cryopreservation Versus Those Who Were Unsuccessful

	Successful sperm cryopreservation (n = 8)	Unsuccessful sperm cryopreservation (n = 15)
Age (y)	15.3 ± 1.4	14.3 ± 1.7
Tanner staging (average, range)	4.5 (3-5)	4.3 (2-5)
Testicular volume (ml)	18.5 ± 2.5	16.6 ± 4.7
Facial hair (% of subjects)	75	80
Voice change (% of subjects)	100	87
Laryngeal prominence (% of subjects)	88	67
Therapy	75% GnRHa treatment 25% GAHT	60% GnRHa treatment 40% GAHT

A retrospective chart review of 23 transgender girls.

8 produced a semen sample.

The 8 transgender females who successfully underwent fertility preservation presented with at least 1 secondary sex characteristic.

Age did not correlate with Tanner staging of pubic hair or testicular volume. Median semen parameters were at or above threshold.

Fertility preservation - animal studies

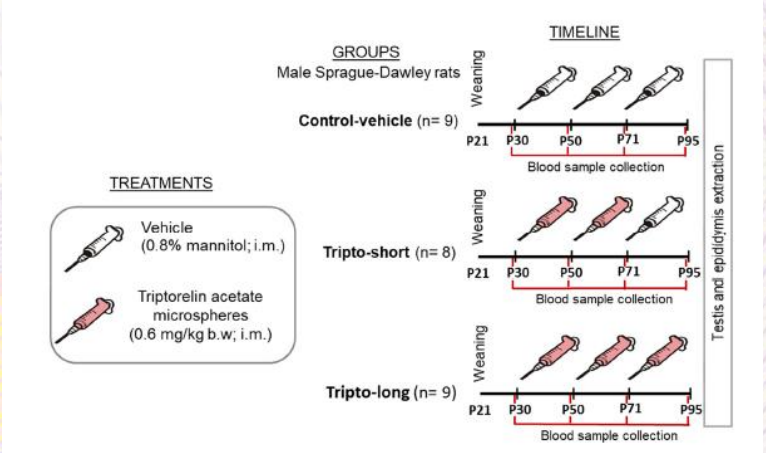
International Journal of *Molecular Sciences*

MDPI

Communication

The GnRH Agonist Triptorelin Causes Reversible, Focal, and Partial Testicular Atrophy in Rats, Maintaining Sperm Production

Alberto Marcos [1], Maria Cruz Rodríguez del Cerro [1], Rosa María Fernández [2,3], Eduardo Pásaro [2,3], Nuria Arias-Ramos [4], Pilar López-Larrubia [4,5], Pilar González-Peramato [6,7], Antonio Guillamon [1] and Maria P. De Miguel [6,*]



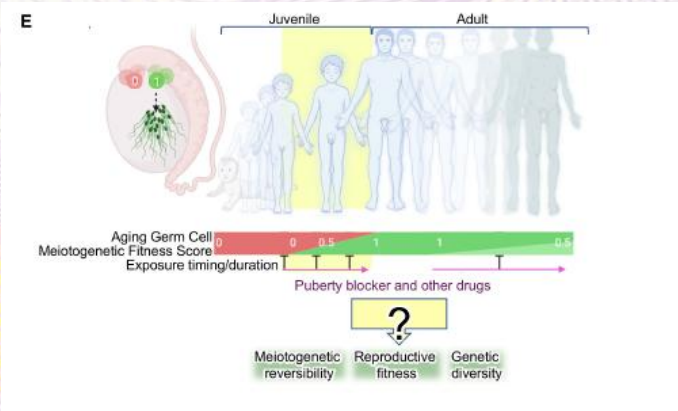
Treated rats had reduced testicular volume and low testosteron levels.

Testicular tissue of 1/3 of the short and 50 % of the long treated rats were atrophic.

But all rats had sperm in the epididymis.

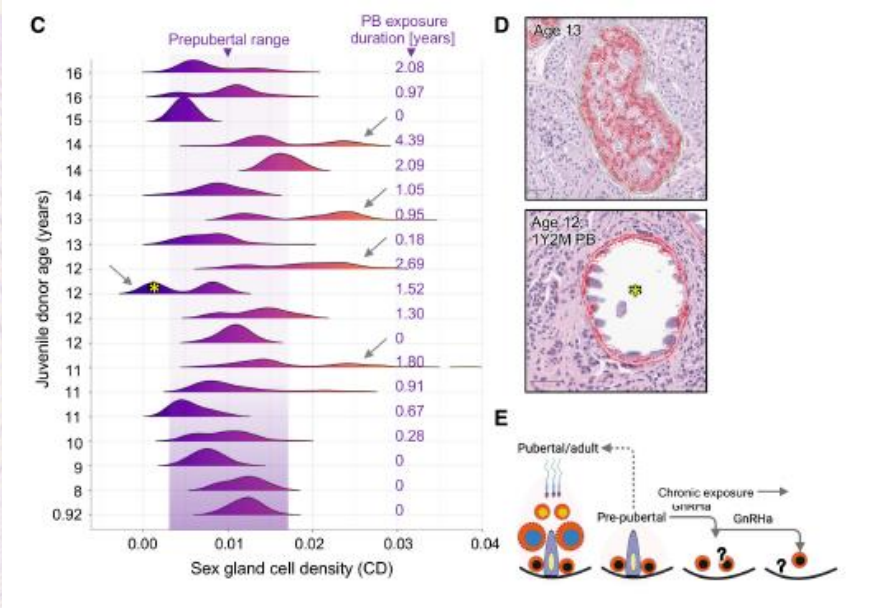
Effects of triptorelin are partielly reversible.

Fertility preservation - single-cell RNA



Single-RNA dataset to date (>100K single cells; 25 patients), merging both public and novel datasets.

"This combined with the noted gland atrophy and abnormalities from the histology data raise a potential concern regarding the complete 'reversibility' and reproductive fitness of SSC."



Fertility Preservation – semen parameters

Semen parameters in transgender women and gender-diverse people assigned male at birth using gender-affirming hormones: cohort study and scoping review

Renee Tristano, B.S.,[a] Alexis Hood, M.D.,[b] Bridget Huepful, B.S.,[b] Omer Raheem, M.D.,[c] John Schneider, M, D, M.P.H.,[d] and Amanda Adeleye, M.D.[e]

[a] Pritzker School of Medicine, University of Chicago, Chicago, Illinois; [b] Department of Obstetrics & Gynecology, University of Chicago, Chicago, Illinois; [c] Department of Urology, University of Chicago, Chicago, Illinois; [d] Department of Medicine, Section of Infectious Diseases and Global Health, University of Chicago, Chicago, Illinois; and [e] CCRM, Lone Tree, Colorado

Volume (mL)	
Median	0.6
IQR	0.5–0.7
Range	0.2–4
Concentration (M/mL)	
Median	25
IQR	16–67.5
Range	0.2–99
Motility (%)	
Median	22
IQR	13–68
Range	0–70
TMC (Million)	
Median	2.5
IQR	1.8–40.2
Range	0–70

15 participants included, 13 produced specimen.

Treatment: Estrogen +/- progesterone and an antitestosterone).

8 reported tucking in the past, 4 are currently tucking.

8 were azoospermic and 5 contained sperm.

Producing a sperm sample was rated moderately difficult physically and psychologically.

Hormone analysis for all participants, participants with azoospermic or aspermic ejaculates, and participants able to produce an ejaculate containing motile sperm.

	All (n = 15)			Azoospermic or Aspermic (n = 11)			Ejaculate Containing Motile Sperm (n = 4)		
	Median	IQR	Range	Median	IQR	Range	Median	IQR	Range
Estradiol	185	133–320	55–1117	199	133–320	44–1117	147	100.5–410	55–672
Testosterone	23	14–161	8–436	17.5	14–23	8–248	193	94.5–330.5	28–436
FSH	0	0–0.4	0–2.7	0	0–0.4	0–1	0.4	0.2–1.6	0–2.7
LH	1	0–3.1	0–5.9	0.5	0–2.7	0–3.2	3.8	1.9–5.2	0.7–5.9

Note: One participant who was aspermic did not have complete hormone data available and was excluded from the testosterone analysis. IQR = interquartile range, FSH = follicle-stimulating hormone, LH = luteinizing hormone.

Tristano. Semen parameters in transgender women. F S Rep 2025.

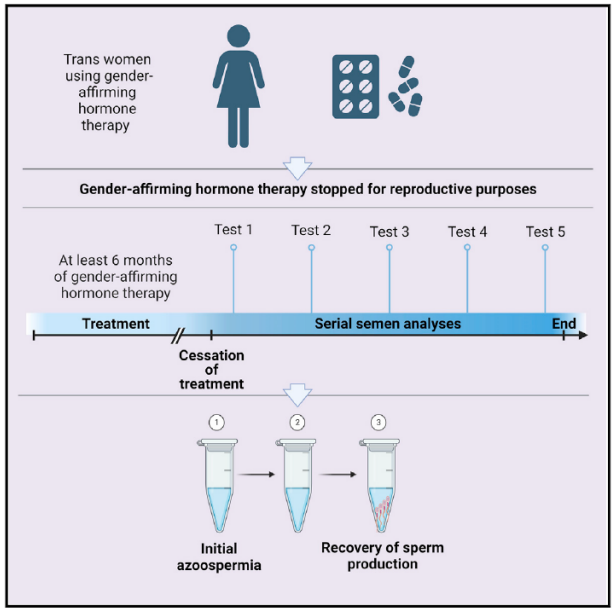
Fertility Preservation – semen parameters

Cell Reports Medicine

Report

Successful restoration of spermatogenesis following gender-affirming hormone therapy in transgender women

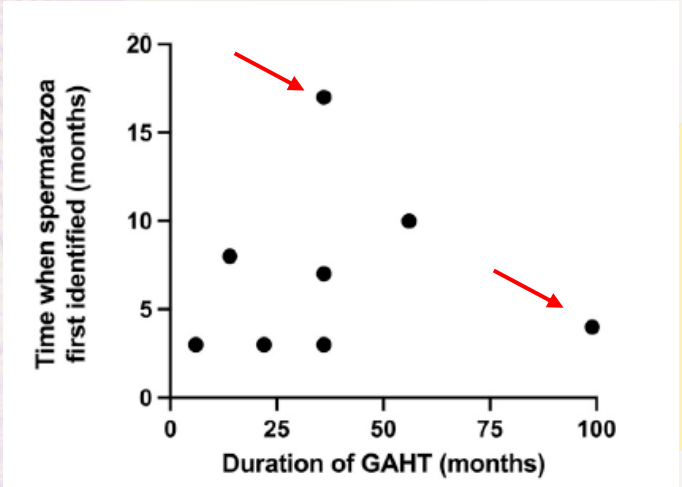
Graphical abstract



9 persons with testicular tissue.

Mean age was 26.1 years (range: 18–32 years), and the median duration of GAHT was 36 months (range: 6–216 months). All used estrogen in combination with an anti-androgen (spironolactone or cyproterone acetate).

Viable spermatozoa were seen in all 9 patients.



Fertility preservation - single-cell RNA

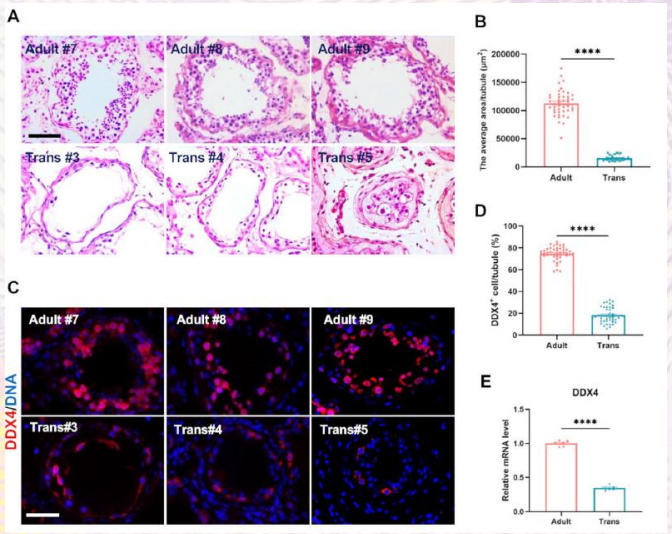
Yu et al. Cell & Bioscience (2025) 15:106
https://doi.org/10.1186/s13578-025-01445-3

Cell & Bioscience

RESEARCH Open Access

Single-cell RNA sequencing uncovers abnormal Sertoli-cell elevation and testicular niche impairment in the transfemales's testis

Jun Yu[1†], Longfei Hu[2†], Huixia Li[1†], Xiaofeng Li[3†], Chaoye Ma[1], Ting Jiang[1], Yongxin Liu[1], Xue Wang[1], Xia Li[1], Liandong Zuo[4], Haocheng Lin[5*], Wenming Xu[6*], Yiwen Zhou[7*], Yang Liu[7*] and Hao Chen[1,4,8*]



49,385 single-cell transcriptomes of 6 adults, 2 transfemales and 4 juvenile donors aged 7, 11, 13, and 14 years.

GAHT led to a significant reduction in spermatogenic cells, an increase in Sertoli cell numbers per seminiferous tubule.

Molecular analyses revealed upregulation of genes such as Decorin (DCN), Myoglobin (MB), and Beta-2-Microglobulin (B2M) in Sertoli cells, with enrichment in pathways related to cell adhesion, cytokine response, and signaling.

Collagen fiber infiltration disrupted the testicular microenvironment, further impairing germline- Sertoli cell communication.

Fertility preservation – animal models

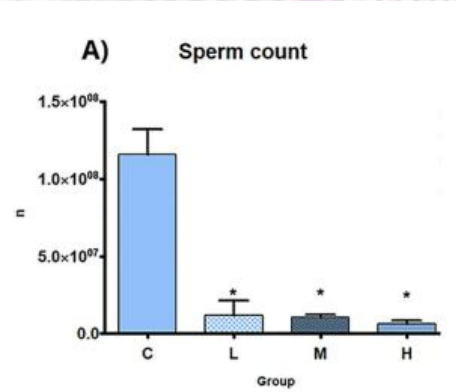
Tammaro *et al. Biology Direct (2024) 19:5*
https://doi.org/10.1186/s13062-023-00450-1

Biology Direct

RESEARCH Open Access

Risk assessment of transgender people: implementation of a demasculinizing–feminizing rodent model including the evaluation of thyroid homeostasis

Alessia Tammaro[1,2], Gabriele Lori[1], Andrea Martinelli[3], Luigia Cancemi[3], Roberta Tassinari[1*] and Francesca Maranghi[1]



Four male adult rats/group were subcutaneously exposed to three doses plus control of β-estradiol valerate plus cyproterone acetate at: 0.045+0.2 (low), 0.09+0.2 (medium) and 0.18+0.2 (high) mg/dose, five times/week.

The doses induced feminizing–demasculinizing effects: decreased testosterone serum levels at the corresponding cisgender, increased estradiol, impairment of male reproductive function and reversal of sex-specific CYP liver expression.

Fertility preservation – animal models

A Mouse Model to Investigate the Impact of Gender Affirming Hormone Therapy with Estradiol on Reproduction

Daniel R. Pfau, Amanda R. Schwartz, Cynthia Dela Cruz, Vasantha Padmanabhan, Molly B. Moravek, and Ariella Shikanov**

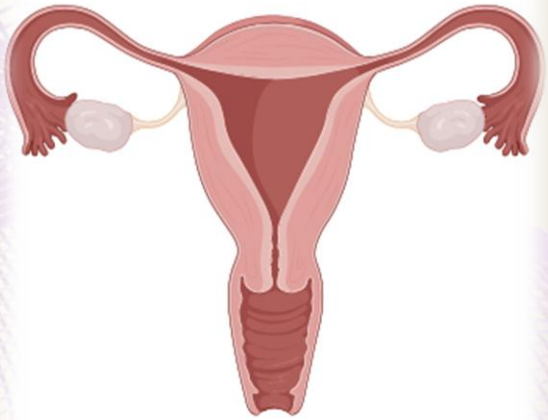
Table 2. Comparison of experimental results to clinical outcomes, †dose effect (Clinical data citations: Matoso et al., 2018; Schneider et al., 2017; Sapino et al., 1987).

Anatomy	Previous clinical findings, versus cisgender men*	Our mouse model findings, versus control males
Testis	Lower weight	Lower weight†
	Spermatogenesis: Complete to absent (High variability between patients)	Spermatogenesis: Complete
	More seminiferous tubules with vacuolitic sertoli cells	More seminiferous tubules with vacuolitic sertoli cells†
	Leydig cells: Present to absent (High variability between patients)	Leydig cells: Present
Epididymis	Smaller tubules	Smaller tubule cross-sectional area
Spermatocytes	Fully mature to absent (High variability between patients)	Mature morphology
		Altered movement†
Overall histological findings	Expanded Interstitium	Interstitium expanded in epididymis
Hormones	Lower T	Lower weekly† and terminal T
	Lower FSH	Lower FSH
	Lower LH	Lower LH†
	Higher E2	Higher E2

Intact male mice implanted with capsules containing one ofthree different E doses (low 1.25 mg; mid 2.5 mg; high 5 mg), or a blankcontrol capsule.

All E-GAHT doses affect epididymis tubule size similarly while seminiferous tubule morphology and bladder weight changes are dose-dependent.

E-GAHT does not alter the presence of mature sperm, though E-exposed sperm have altered motility.



Fertility preservation – persons with ovaries and uterus

Journal of Gynecology Obstetrics and Human Reproduction 54 (2025) 102893

Contents lists available at ScienceDirect

Journal of Gynecology Obstetrics and Human Reproduction

journal homepage: www.elsevier.com/locate/jogoh

Original Article

Reproductive functions and fertility preservation in transgender men: A French case series

Charlotte Dupont [a,b], Sophie Grateau [a], Emilie Moreau [a], Nicolaï Johnson [c], Diane Rivet-Danon [a], Sarra Cristofari [d], Marie Prades [a], Rachel Lévy [b,c], Kamila Kolanska [b,c], Nathalie Chabbert-Buffet [c], Nathalie Sermondade [a,b,*]

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[b] Sorbonne Université, Centre de recherche Saint-Antoine, Inserm US938 75012 PARIS, France
[c] Service de Gynécologie, Obstétrique et Médecine de la Reproduction, Hôpital Tenon (AP-HP), Sorbonne-Université 75020 PARIS, France
[d] Service de Chirurgie Reconstructrice et Plastique, Hôpital Tenon (AP-HP), Sorbonne-Université 75020 PARIS, France

Table 2
Clinical and biological outcomes of controlled ovarian stimulation. NS: not significant; SD: standard deviation.

	Transgender men	Cisgender oocyte donors	*p*-value
Stimulation duration (mean ± SD) (days)	10.8 ± 1.77	10.3 ± 1.55	NS
Total FSH dose administered (mean ± SD) (UI)	1823.1 ± 507.90	2105.8 ± 812.73	NS
Oestradiol levels at triggering (mean ± SD) (pg/mL)	2201.3 ± 1099.02	2412.9 ± 2106.17	NS
Number of retrieved oocytes (mean ± SD)	22.5 ± 11.47	26.5 ± 20.04	NS
Number of mature oocytes (mean ± SD)	17.2 ± 9.61	18.3 ± 10.71	NS
% mature oocytes (mean ± SD)	76.1 ± 14.90	77.4 ± 16.69	NS

Retrospective study.

Comparison of ovarian stimulation outcomes between transgender men and presumed fertile women from an oocyte donation program.

Between June 2018 and February 2022.

118 transgender men were referred to the FP consultation, of whom 13 ultimately underwent FP through oocyte vitrification following ovarian stimulation.

No significant difference in the clinical and biological outcomes of ovarian stimulation, including duration of stimulation, total FSH dose administered, number of oocytes retrieved, and number of mature oocytes obtained.

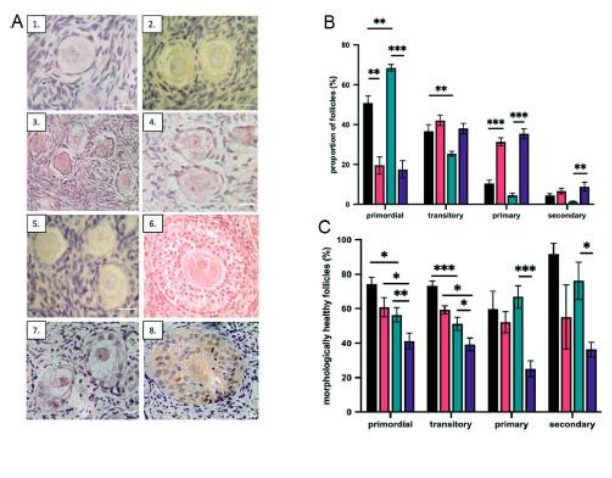
Fertility preservation – persons with ovaries and uterus

Reproduction & Fertility | E Bailie *et al.* | 4:2 | e220102

RESEARCH

The ovaries of transgender men indicate effects of high dose testosterone on the primordial and early growing follicle pool

Emily Bailie[1], Mila Maidarti[1], Robert Hawthorn[2], Stuart Jack[3], Neale Watson[4], Evelyn E Telfer[1] and Richard A Anderson[5]



Whole ovaries were obtained from 8 persons with ovaries and uterus (mean age: 27.6 ± 1.7 years; range: 20–34 years).

1000 mg of testosterone undecanoate at approximately 12-week intervals prior to tissue collection (range of treatment 18 months–10 years).

In uncultured tissue, testosterone exposure was associated with reduced follicle growth activation, poor follicle health and increased DNA damage.

After 6 days of culture, there was enhanced follicle activation, deterioration in morphological health and increased DNA damage.

These data indicate that high circulating concentrations of testosterone have effects on the primordial and small-growing follicles of the ovary.

Fertility preservation – persons with ovaries and uterus

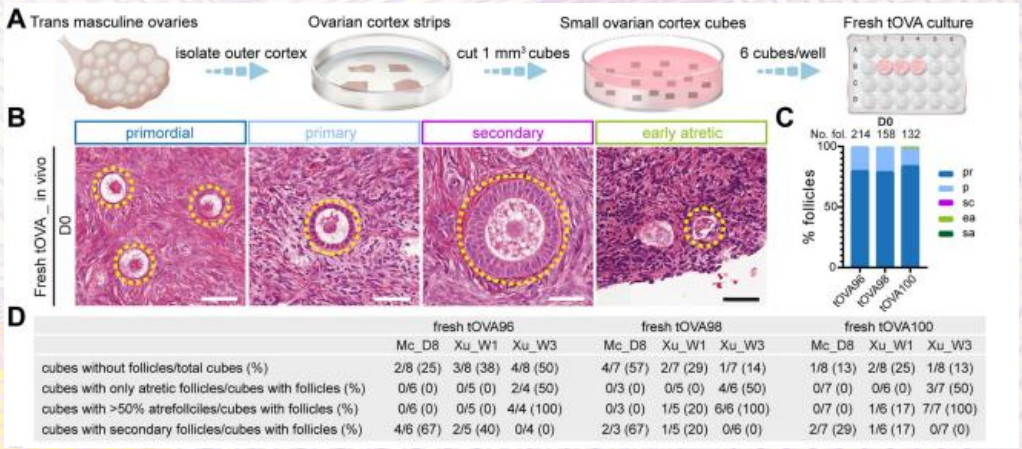
OXFORD human reproduction

Human Reproduction, 2024, 39(12), 2743–2753
https://doi.org/10.1093/humrep/deae240
Advance Access Publication Date: October 21, 2024
Original Article

Reproductive biology

In vitro growth of secondary follicles from cryopreserved-thawed ovarian cortex

Hui Cheng[1,2], Fu Wei[1,2], Julieta S. Del Valle[1,2], Tessa H.R. Stolk[3,4,5], Judith A. Huirne[3,4,5], Joyce D. Asseler[3,4,5], Gonneke S.K. Pilgram[6], Lucette A.J. Van Der Westerlaken[6], Norah M. Van Mello[3,4,5], and Susana M. Chuva De Sousa Lopes[1,2,7,*]



D

	fresh tOVA96			fresh tOVA98			fresh tOVA100		
	Mc_D8	Xu_W1	Xu_W3	Mc_D8	Xu_W1	Xu_W3	Mc_D8	Xu_W1	Xu_W3
cubes without follicles/total cubes (%)	2/8 (25)	3/8 (38)	4/8 (50)	4/7 (57)	2/7 (29)	1/7 (14)	1/8 (13)	2/8 (25)	1/8 (13)
cubes with only atretic follicles/cubes with follicles (%)	0/6 (0)	0/5 (0)	2/4 (50)	0/3 (0)	0/5 (0)	4/6 (50)	0/7 (0)	0/6 (0)	3/7 (50)
cubes with >50% atrefollciles/cubes with follicles (%)	0/6 (0)	0/5 (0)	4/4 (100)	0/3 (0)	1/5 (20)	6/6 (100)	0/7 (0)	1/6 (17)	7/7 (100)
cubes with secondary follicles/cubes with follicles (%)	4/6 (67)	2/5 (40)	0/4 (0)	2/3 (67)	1/5 (20)	0/6 (0)	2/7 (29)	1/6 (17)	0/7 (0)

Cryopreserved-thawed ovarian cortical tissue from adult trans masculine donors (n = 3) and adult cis female donors (n = 3) were used for in vitro culture following the first culture step (7–8 days and 21 days) and compared to freshly isolated ovarian cortex from trans masculine donors (n = 3) and to ovarian cortex prior to culture.

Our study revealed that cryopreserved-thawed cOVA can be used to generate high quality secondary follicles after culture.

Using the same culture protocol on tOVA (fresh and cryo) did not yield high-quality secondary follicles, suggesting that either the testosterone treatment affects follicular quality or adapted culture protocols are necessary.

Fertility preservation - animal studies

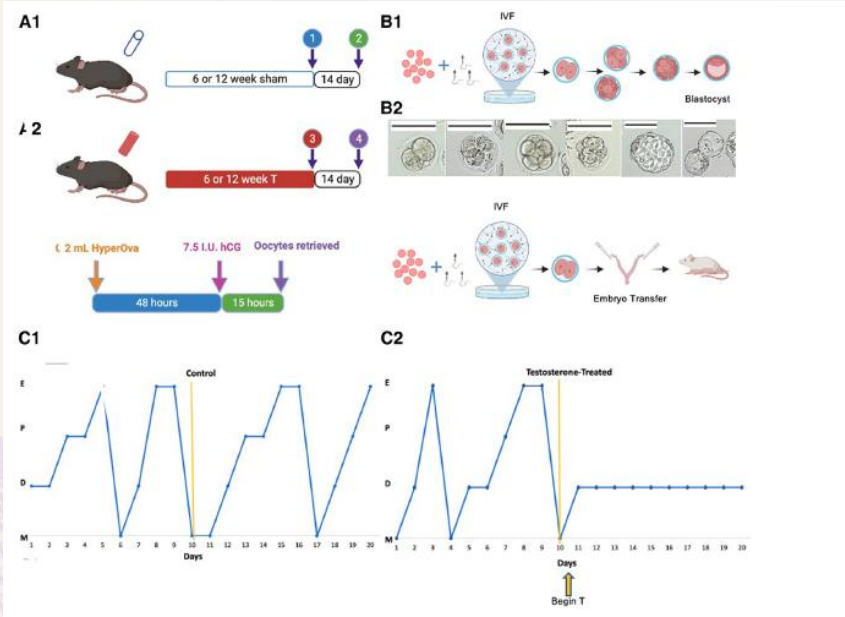
Original Research ajog.org

GYNECOLOGY

Impaired in vitro fertilization outcomes following testosterone treatment improve with washout in a mouse model of gender-affirming hormone treatment

Check for updates

Amanda R. Schwartz, MD; Min Xu, PhD; Nicholas C. Henderson, PhD; Cynthia Dela Cruz, PhD; Daniel Pfau, PhD; Vasantha Padmanabhan, PhD; Ariella Shikanov, PhD; Molly B. Moravek, MD, MPH



120 mice in 4 groups (current testosterone, testosterone washout, control group, control washout).

Current long-term testosterone treatment impaired in vitro fertilization outcomes, with fewer mature oocytes retrieved (13.7±5.1vs 28.6±7.8 (P<.0001) leading to fewer cleavage-stage embryos (12.1±5.1 vs 26.5±8.2; P<.0001) and blastocysts (10.0±3.2 vs 25.0±6.5; P<.0001).

There was recovery of in vitro fertilization outcomes following washout in the short-term treatment cohort, with incomplete reversibility in the long-term cohort. **Testosterone did not negatively affect maturity, fertilization, or blastulation rates.**

Fertility preservation - animal studies

Endocrinology, 2023, **164**, 1–10
https://doi.org/10.1210/endocr/bqad145
Advance access publication 28 September 2023
Research Article

Puberty Suppression Followed by Testosterone Therapy Does Not Impair Reproductive Potential in Female Mice

Prachi Godiwala,[1,2] Tracy F. Uliasz,[1] Katie M. Lowther,[1] Deborah Kaback,[1] and Lisa M. Mehlmann[1]

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[2]Center for Advanced Reproductive Services, Division of Reproductive Endocrinology and Infertility, Department of Obstetrics and Gynecology, UConn Health, Farmington, CT 06030, USA

Correspondence: Lisa Mehlmann, PhD, Department of Cell Biology, UConn Health, 263 Farmington Ave, Farmington, CT 06030, USA. Email: lmehlman@uchc.edu.

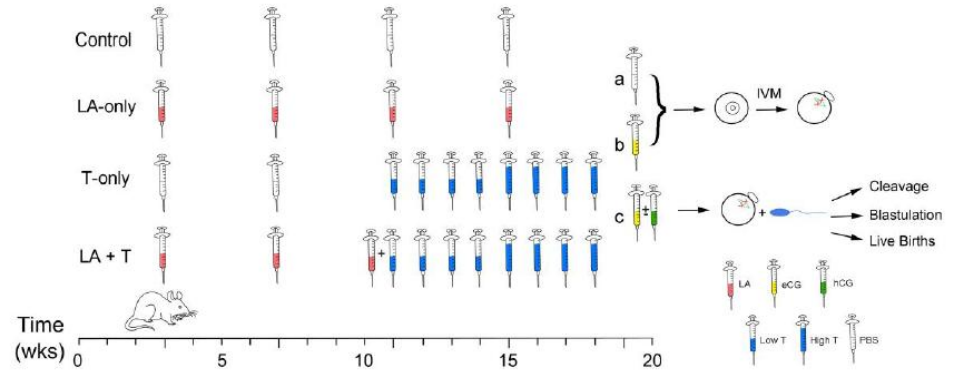


Figure 1. Overview of experimental design. (A) Mice injected with PBS; (B) mice injected with eCG only; (C) mice injected with eCG and hCG. Abbreviations: eCG, equine chorionic gonadotropin; hCG, human chorionic gonadotropin; IVM, in vitro maturation.

Mice were treated with depot leuprolide acetate (LA), followed by virilizing therapy with testosterone (T) or LA or testosterone only.

LA effectively inhibited puberty when mice were treated beginning at 3 weeks of age.

LA treatment was associated with higher mouse weight but lower ovarian weight.

LA-treated mice ovulated developmentally competent eggs in response to gonadotropin administration.

Ovaries from mice treated with LA and T produced oocytes that had morphologically normal meiotic spindles after in vitro maturation and responded to gonadotropin stimulation.

Eggs from mice treated with LA and T were fertilizable and produced developmentally competent embryos that led to births of fertile pups.

Malignancy risk – persons with ovaries and uterus

Incidence of gynaecological (pre-)malignancies and endometrial activity in transmasculine and gender diverse individuals using testosterone: a retrospective, single-centre cohort study

Asra Vestering,[a,b,c,h] Wouter L. J. van Vugt,[a,b,c,h] Alison M. Berner,[d,e] Malou L. H. Snijders,[f] Martin den Heijer,[c,g] Freek A. Groenman,[a,b,c] Judith A. F. Huirne,[b,c] Chantal M. Wiepjes,[c,g,i] and Norah M. van Mello[a,b,c,i,*]

[a]Department of Obstetrics and Gynaecology, Amsterdam University Medical Center, Location Vrije Universiteit Amsterdam, the Netherlands
[b]Amsterdam Reproduction and Development Research Institute, Amsterdam, the Netherlands
[c]Center of Expertise on Gender Dysphoria, Amsterdam University Medical Center, the Netherlands
[d]Barts Cancer Institute, Queen Mary University of London, United Kingdom
[e]Gender Identity Clinic, Tavistock and Portman NHS Foundation Trust, London, United Kingdom
[f]Department of Pathology, Amsterdam University Medical Center, Amsterdam, the Netherlands
[g]Department of Endocrinology, Amsterdam University Medical Center, Location Vrije Universiteit Amsterdam, the Netherlands

Retrospective cohort study conducted at the Amsterdam University Medical Centre between February 17, 1972 and December 3, 2018.

Persons with ovaries and uterus using testosteron formulations.

The cohort comprised 1955 TMGD individuals.

No increase risk of malignancies.

	Sample size (N, total)[a]	Median (IQR) unless stated otherwise
Age at start testosterone, years	1955	21 (18–29) Range 14–62
Puberty suppression before start testosterone	1955	413 (21·1%)
BMI	1850	24·0 (21·5–27·5)
Serum testosterone concentration at initiation of GAHT, nmol/L[b]	1027	1·3 (1–1·7)
Serum testosterone concentration during GAHT, nmol/L[b]	1735	20·8 (13–32)
Serum oestradiol concentration at initiation of GAHT, pmol/L[b]	1037	168 (52·5–394)
Serum oestradiol concentration during GAHT, pmol/L[b]	1702	110·9 (71–166·0)
Type of testosterone		
Testosterone esters injections	1687	874 (51·8%)
Testosterone undecanoate injections		299 (17·7%)
Testosterone gel		430 (25·5%)
Other[c]		84 (5·0%)
Other hormonal therapy (known use)		
Progesterone	-	50 (2·6%)
Progesterone/estrogen		8 (0·4%)
GnRH-agonist		29 (1·5%)
(former) smokers	1288	776 (60·3%)

BMI during treatment: 94·6% of data available. Serum testosterone at initiation of GAHT: 52·5% of data available. Serum testosterone during treatment: 88·7% of data available. Serum oestradiol at initiation of GAHT: 53·0% of data available. Serum oestradiol during treatment: 87·1% of data available. Smoking: 65·9% of data available. [a]Excluding missing. [b]GAHT, gender-affirming hormone therapy. [c]Testosterone undecanoate capsules.

Table 1: Study cohort characteristics.

Contraception – persons with overies and uterus

Contents lists available at ScienceDirect

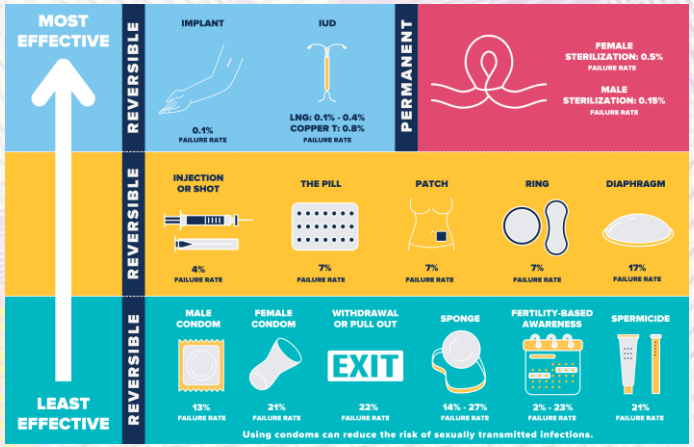
Contraception

journal homepage: www.elsevier.com/locate/contraception

Original Research Article

Contraceptive use among transgender men and gender diverse individuals in the United States: Reasons for use, non-use, and methods used for pregnancy prevention☆,☆☆

Juno Obedin-Maliver [a,b,c], Ava Snow [c], Sachiko Ragosta [d], Laura Fix [d], Jen Hastings [e], Micah E. Lubensky [c,f], Matthew R. Capriotti [c,h], Zubin Dastur [a,c], Annesa Flentje [c,f,g], Mitchell R. Lunn [b,c,i], Heidi Moseson [d,*]



A cross-sectional online survey.

1694 Participants TGD individuals AFAB in the US.

71.0% had used contraception before with 49.4% using it for pregnancy preventio

<u>Contraception ever used:</u>
External condoms (91.8%)
Combined with hormonal contraceptive pills (63.0%) & withdrawal (45.9%).

<u>Contraception method frequently/currently used:</u>
External condoms (35.4%)
hormonal intrauterine device (IUD) (24.8%)
abstinence (19.2%).

Some reported formerly (n = 55, 6.6%) or currently (n = 30, 3.6%) relying on testosterone for pregnancy prevention.

The most reported reasons for never using contraception were not engaging in penis-in-vagina sex (5.7%) or no sex with individuals who produce sperm (4.8%).

Reproductive Health @ EPATH 2025

- Thursday at 11 am and 1.30 pm:

Reproductive Health

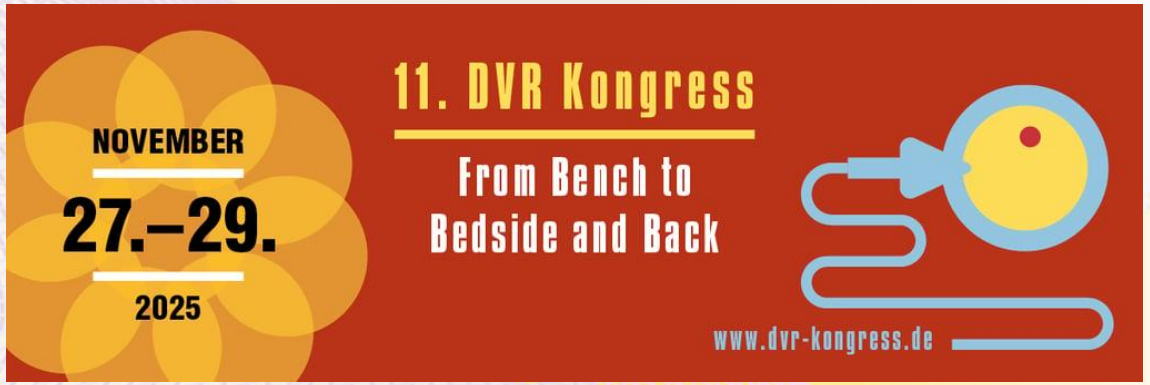
- Friday at 1.30 pm:

State-of-the-Art Symposium (Reproductive Health)

- Saturday at 10.30 am:

State-of-the Art Symposium (Reproductive Health)

Thank you for your attention!



EPATH 4-6 SEPTEMBER 2025
HAMBURG, GERMANY