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LETTER TO THE EDITOR

# Boutique Egg Freezing: Empowering Technology or Marketing Phenomenon? A Word of Caution

**Shruti Agarwal[1] · Mark P. Trolice[1,2] · Jody Lyneé Madeira[3] · Steven R. Lindheim[4,5]**

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## Abstract

The introduction of oocyte vitrification has propelled the field of oncofertility. However, it is becoming increasingly common to offer planned oocyte cryopreservation to healthy, fertile women due to a lack of a partner or other personal issues. The aim of this article is to discuss the pros and cons of planned oocyte cryopreservation along with potential exploitation issues by unregulated clinics and international agencies. This article further encourages obstetricians and gynecologists to discuss these issues of planned oocyte cryopreservation with their patients to empower them to make an educated decision based on research and science rather than be susceptible to entities that stand to gain monetarily by prompting women to fear a childless future.

**Keywords** Oocyte cryopreservation · Social egg freezing · Boutique egg freezing

In 2013, the American Society for Reproductive Medicine (ASRM) removed the experimental label from oocyte cryopreservation (OC). Since then, this technology has become routinely offered as a fertility preservation option to women preparing to undergo gonadotoxic therapy which may result in compromised or complete ovarian failure [1]. With the advent of vitrification technology and its reassuring outcomes, OC for fertility preservation increased from 6090 cycles in 2014 to 13,275 in 2018; a nearly 120% increase [2]. Today, women use OC not only to cryopreserve oocytes prior to cancer treatment but also for nonmedical indications—referred to as planned oocyte cryopreservation (POC) or "social egg freezing."

The use of POC to potentially safe-guard against age-related fertility decline contradicts current ASRM-Society for Assisted Reproductive Technology (SART) guidelines (also endorsed by American College of Obstetricians Gynecologists [ACOG]) that specifically caution against this practice. This opposition stems from limited data about OC's safety, efficacy, indications, long-term effects, cost-effectiveness and emotional risks for healthy women of reproductive age [3].

OC services are increasingly being provided worldwide by infertility clinics but also by egg freezing start-up companies that frame OC as a "feminist pathway to independence" offering control over fertility. These companies target reproductive aged women concerned over their lack of a significant relationship and offer events marketed as "educational," such as egg-freezing pop-ups, curbside vans and cocktail parties. OC services, too, package entertainment

Shruti Agarwal - Ob/GYN; Mark Trolice - Professor and REI; Steven Lindheim - Professor and REI; Jody Madeira -Professor

✉ Shruti Agarwal
dragarwal2020@gmail.com

Mark P. Trolice
DrTrolice@TheIVFcenter.com

Jody Lyneé Madeira
jmadeira@indiana.edu

Steven R. Lindheim
steven.lindheim@wright.edu

1 Department of Obstetrics and Gynecology, University of Central Florida College of Medicine, 6850 Lake Nona Blvd., Orlando, FL 32827, USA

2 Fertility CARE: The IVF Center, 5901 Brick Court, Winter Park, FL 32792, USA

3 Maurer School of Law, Indiana University, 211 S. Indiana Avenue, Bloomington, IN 47405, USA

4 Department of Obstetrics and Gynecology, Boonshoft School of Medicine, Wright State University, 128 Apple Street, Suite 3800 Weber CHE, Dayton, OH 45409, USA

5 Center for Reproductive Medicine, Renji Hospital, School of Medicine, Shanghai Jiao Tong University, 845 Lingshan Road, Shanghai 200135, People's Republic of China

with "treatment"; one option, "eggcations," provides discounted OC services combined with a relaxing vacation [3]. Employers such as Google, Facebook and Apple even incentivize these choices by providing employees medical coverage toward OC as an employee benefit [4].

While growing in popularity, POC marketing raises concerns regarding inadequate disclosure of down-stream costs and issues, including egg thawing, ICSI, embryo development, embryo transfer, refreezing of embryos and inherently complicated disposition options. Furthermore, many women may leave their country for cross-border reproductive care (CBRC) due to legal restrictions or for financial reasons. CBRC carries its own risks to women, such as the possibility of receiving unclear information and consequences of making treatment decisions based on economic rather than medical reasons [5].

It is imperative for health-care providers to fully explain to women considering POC the implications and limitations of using ovarian reserve tests. A convenient assessment of ovarian age, anti-Mullerian hormone (AMH), may induce unsubstantiated anxiety regarding fertility in women not diagnosed with infertility and in those less than 35 years of age. Additionally, the fact that many women (especially those under 34 years of age) have a high likelihood of never using cryopreserved eggs means that women may overvalue POC [4]. Furthermore, there is a lack of consensus regarding the optimal timing of POC. Other issues frequently not addressed include the low but possible risk that no oocytes will survive thaw, failed fertilization or lack of embryo implantation; an increased maternal morbidity in older pregnant women; and still unknown long-term child outcomes [4].

POC, while not endorsed by ASRM and ACOG, is expanding and a popular option for women seeking to delay childbearing. Our understanding of the short and long-term implications of OC is still in its infancy. Thus, as health-care providers, we must provide women with realistic expectations, full informed consent and non-judgmental support as they negotiate multiple pressures and decisions regarding family building to ensure they are not cajoled into freezing their eggs. Our professional responsibility is to encourage, not undermine, reproductive autonomy and reproductive liberty.

## Declarations

**Conflict of Interest** The authors declare that they have no conflict of interest.

## References


1. Society for Assisted Reproductive Technology. Mature oocyte cryopreservation: a guideline. Fertil Steril. 2013;99(1):37–43.
2. National Summary Report. (n.d.). https://www.sartcorsonline.com/rptCSR_PublicMultYear.aspx.
3. van de Wiel L. The speculative turn in IVF: egg freezing and the financialization of fertility. New Genet Soc. 2020;39(3):306–26. https://doi.org/10.1080/14636778.2019.1709430.
4. Alteri A, Pisaturo V, Nogueira D, Dangelo A. Elective egg freezing without medical indications. Acta Obstet Gynecol Scand. 2019;98(5):647–52.
5. Salama M, Isachenko V, Isachenko E, Rahimi G, Mallmann P, Westphal LM, et al. Cross border reproductive care (CBRC): a growing global phenomenon with multidimensional implications (a systematic and critical review). J Assist Reprod Genet. 2018;35(7):1277–88.




## About the Author

**Shruti Agarwal** is a recent graduate from University of Central Florida's Obstetrics and Gynecology residency program. She is currently pursuing an ASRM-SRS fellowship in Minimally Invasive and Robotic Surgery with Dr. Camran Nezhat in Palo Alto, California. She aspires to further pursue a fellowship in Reproductive Endocrinology and Infertility.