

A candid assessment of social fertility preservation via oocyte cryopreservation

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For a variety of reasons including lack of a partner, completing career plans and reaching financial stability, women are increasingly postponing motherhood and resorting to elective oocyte cryopreservation to hold on their fertility. The surge in the market demand for elective oocyte banking (EOB) also referred by some as social fertility preservation, deserves a candid assessment of three fundamental questions: 1) Why do women freeze their oocytes? 2) From where are they getting information about it? 3) How effective is social fertility preservation?

1) A recent in-depth, qualitative, interview-based study of women who were banking oocytes for elective indications in 4 clinics (2 academic, 2 private) on the East and West Coast revealed that women postpone pregnancy not because of education or careers. Rather, an increasing number of highly educated women of multiple ethnicities were unable to find male partners committed to marriage and family life—the reflection of a growing demographic imbalance between college-educated men and women in America. Women lamented this dearth of marriageable men, viewing egg freezing as a way to buy time, prevent a bad marriage, and/or pursue a future route to single motherhood.

2) A recent study reported that women rely on their primary care physicians (PCPs) for initial advice, but PCPs are not always fully prepared to discuss oocyte cryopreservation. In addition to mixed feelings on whether oocyte cryopreservation should be used for elective reasons, one third of OB/GYN residents in US overestimate the age at which there is a decline in female fertility. Over half of residents (54%) also overestimated the success rates using ART's. To promote informed reproductive decision-making among patients, efforts should be made to help OB/GYNs provide comprehensive fertility education to all women, while also respecting patient choices.

3) The new technique of vitrification has optimized oocytes survival and several reports have shown that the use of vitrified/rewarmed oocytes may provide results almost as good as those obtained with fresh oocytes at least in center with large experience. Preliminary data (n=167) reported that for women younger than 35, claimed a pregnancy rate of 42%; while for

women aged 35-37, it was 33%, and for women 38-40, it was 30%. A survey of the literature on oocyte vitrification reported about 5% live birth rate per vitrified oocyte in women under the age of 36 years meaning that on average, one live birth should be expected for about 20 vitrified oocytes. Other reports suggest live births with as little as 8-10 frozen-thawed oocytes. The real number of babies born worldwide from frozen eggs is unknown, but many of them have been almost exclusively generated with oocytes retrieved from young egg donors. However, the clinical outcomes reported for egg donors should not be used to quote “success rates” for other group of users such as women of various ages for fertility postponement. Furthermore, the experience of IVF clinics worldwide varies considerably mainly for the lack of standardized protocol for vitrification; therefore success rates of the most experienced clinics should not be considered as representative of success for clinics with less. Criticism has been recently raised over the cost-effectiveness of the oocyte cryopreservation technique. In fact, costs are not limited to oocyte retrieval and storage expenses. One should bear in mind that IVF has to be used once the patient decides to use frozen oocytes. A cost-effectiveness algorithm indicates that the highest cost-benefit of oocyte freezing is when it is performed at age 37. However, recent reports showed only a small percentage (~10%) of women who cryopreserved their own oocytes for social purposes actually returned to use them.

In summary, elective oocyte cryopreservation is empowering women in some respects but it is also creating unwanted pressure. It is critical for women to get the correct information that fertility declines with age, and that there is still misperception, fueled by popular media emphasizing pregnancies of celebrities at advanced age without disclosing the full truth (i.e., use of donor eggs). To make informed choices women rely on their primary care physicians for initial advice, but PCPs are not always fully prepared to discuss oocyte cryopreservation. Data on the effectiveness of oocyte cryopreservation for fertility postponement are slowly being accumulated.