Published Ahead of Print on January 22, 2013 as 10.1200/JCO.2012.47.5798
The latest version is at http://jco.ascopubs.org/cgi/doi/10.1200/JCO.2012.47.5798

JOURNAL OF CLINICAL ONCOLOGY COMMENTS AND CONTROVERSIES

Lives in the Balance: Women With Cancer and the Right to Fertility Care

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See accompanying article doi: 10.1200/JCO.2012.44.0990

The risk of infertility after cancer therapy has emerged as a major quality-of-life issue for cancer survivors.[1] Indeed, cancer survivors have been galvanized to improve the dissemination of information about cancer-related infertility and have supported the development of reproductive technologies that allow survivors to have biologic children after cancer.[2] The medical community has embraced oncofertility as well, and the American Society of Clinical Oncology (ASCO) recommends that patients with cancer of reproductive age be counseled about the reproductive risks of cancer therapies and the options available to preserve fertility.[3] The article by Rodriguez et al[4] describes some ethics-based concerns against the use of reproductive technologies in patients with cancer. When implementing a relatively new practice, such as oncofertility, it is critical that both potential risks and benefits be carefully examined. In this article, we provide another view of oncofertility counseling that is important for the practicing oncologist to consider.

Although most of the concerns of Rodriguez et al[4] are related to the social implications of oncofertility, it is also important to address the issue of patient autonomy, a critical principle in medical ethics.[5] Substantial data demonstrate that patients with cancer are significantly invested in their future reproductive capacity and that there exist successful fertility preservation options to diminish the risk of infertility. Established fertility preservation techniques currently available to postpubertal individuals include sperm cryopreservation, oocyte cryopreservation, and embryo cryopreservation, and experimental options include testicular and ovarian tissue cryopreservation.[6-8] Increasing success and significant evidence of safety have provided reassurance regarding the use of these techniques.[9,10] Education about the risks and success rates of and alternatives to fertility preservation techniques (including adoption and use of donor gametes) is empowering for patients, allowing them to make informed choices about their future.

Contrary to this notion of informed choice, Rodriguez et al[4] suggest that the existence of reproductive technology "raises the imperative for one to participate." Although the decision to pursue fertility preservation is complex, there is no evidence that informing patients about this option compels them to participate. On the contrary, evidence indicates that patients with cancer who receive counseling about fertility preservation experience less long-term regret than those patients who do not receive counseling, even if the patients choose not to pursue fertility preservation.[11] In the fertility preservation program at the University of Pennsylvania, fewer than 50% of individuals counseled regarding the reproductive risks of cancer treatment and fertility preservation options available pursued assisted reproductive techniques. Moreover, at a time when young patients are forced to confront a life-threatening cancer diagnosis, the opportunity to discuss fertility preservation, related to the future restoration of health, allows patients to feel hopeful about their survival and life after cancer. Withholding available information and existing medical technologies from women is in direct opposition to the goal of protecting patient autonomy. Educating oncologists to address fertility concerns and add this skill set to their care of young patients furthers the objective of caring for the whole patient and not the cancer alone. This advance in oncologic practice, which extends to survivorship at the outset of care, may serve to increase patient confidence in the medical community as a whole.

One of the principal ethical concerns surrounding fertility preservation raised by Rodriguez et al[4] focuses on the disposition of embryos and tissues. They point out that as more embryos and tissues are cryopreserved for fertility preservation, more disputes may occur regarding ownership, which could become a social burden. Embryo disposition has been a particular concern for owners of embryos, because embryos usually belong to two individuals, and for those who believe that life begins at conception.[12] Although the amount of cryopreserved tissue may increase slightly through implementation of fertility preservation, the additional burden on society will be minimal, because an overwhelming majority of cryopreserved tissues originate from healthy infertile patients attempting to conceive. Furthermore, as oocyte and ovarian tissue cryopreservation technologies evolve, fewer patients may elect to cryopreserve embryos. Thus, striving for advances in fertility preservation options for female patients will help to alleviate some potential disputes regarding embryo ownership in the larger field of reproductive medicine.

Rodriguez et al[4] also point out that the allocation of resources toward fertility preservation may be unwise because it affects a relatively small population of female patients with cancer. Although this may have been a legitimate concern in the past, the research accomplished under the auspices of fertility preservation thus far has furthered the understanding of reproductive physiology, leading to significant breakthroughs in the field of reproductive medicine.[6,10,13] These breakthroughs have the potential to extend treatments for infertility, contraception, and conservation of endangered species.[14] Moreover, from a practical perspective, most fertility preservation procedures are not currently covered by insurance (even in states with mandated in vitro fertilization coverage), and affected individuals must pay out of pocket for fertility treatments. It may be that this

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coverage policy allows for allocation of scarce federal and insurance resources toward other critical health care needs. Conversely, the general lack of coverage for fertility techniques has profoundly limited access to care for underserved populations. Ultimately, our society must decide whether the ability to have a child is a positive right.[15] If so, then these technologies should be made available to all individuals experiencing infertility, including those patients facing fertility-threatening therapies.

Rodriguez et al[4] go on to suggest that oncofertility represents the typical American reactive response of finding a "technologic fix at the end" rather focusing on cancer prevention. Although disease prevention needs to be a significant health care priority, this argument may oversimplify the state of medical care in the United States and abroad. Despite extensive research efforts toward the prevention of oncogenesis and the development of less-gonadotoxic cancer therapies, the eradication of cancer and treatment of related infertility remain long-term health care goals. Thus, until these goals are reached, available technologies exist that may allow individuals with cancer to enter survivorship with the option to have a biologic child. Hence, physicians have a responsibility to inform their patients of these options.

Finally, Rodriguez et al[4] suggest that oncofertility (and the entire field of reproductive medicine) perpetuates the social notion that "infertility is psychologically and socially devastating for men and women" and, by extension, that genetics is "the primary determinant of what constitutes a family." It may be true that society has traditionally valued biologic parenting, but recent evidence suggests that nonbiologic parenting is becoming more accepted as adoption and the use of donor gametes are increasingly being implemented.[16,17] Unfortunately, significant barriers to nonbiologic parenting options remain in the United States, particularly for cancer survivors. These options are often costly, and adoption is typically restricted to young married couples in good health. To adopt a child, adoption agencies often require proof that cancer survivors have been disease free for at least 5 years, with no significant underlying comorbidities.[18] Consequently, fertility preservation strategies may offer patients with cancer the best chance to have a family after cancer, underscoring the importance of informed decision making for young patients as they navigate the complex options for becoming a parent. Rather than restricting access to reproductive technologies, efforts should be made to make all forms of parenting available to cancer survivors.[19]

In conclusion, at this point, there is substantive evidence that the application of reproductive technologies among individuals facing gonadotoxic cancer therapies is an ethically sound practice. Accordingly, following the recommendation of ASCO, the options for having children after cancer, as well as the reproductive risks of cancer therapy, should be discussed with all young patients.[3] An informed choice about whether to pursue any given fertility-related technology can only be made after a thorough discussion of its risks, success rates, and cost and of the likelihood of future infertility. Given that some fertility preservation procedures are still considered experimental, there is an imperative to conduct more research in this field to improve the efficacy and safety of and access to reproductive technologies among those facing gonadotoxic therapies. The evolution of any idea that reflects a paradigm shift, such as oncofertility, should be considered ethically from all angles. However, medical science has now advanced to allow young female patients the option of preserving their fertility, alongside their male counterparts, and it is important that oncologists feel empowered to discuss these advances with their patients.

AUTHORS' DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST

The author(s) indicated no potential conflicts of interest.

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DOI: 10.1200/JCO.2012.47.5798; published online ahead of print at www.jco.org on January 22, 2013

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Acknowledgment

Supported by Grant No. 1 UL1 RR024926-01 from the National Institutes of Health.

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