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## *Preserving versus Restoring Fertility - Restorative Reproductive Medicine Is Not Enough*

Restorative reproductive medicine (RRM)--it sounds nurturing, wholesome, and holistic. It implies common sense. And in some ways, many of its principles are. According to the International Institute for Restorative Reproductive Medicine (IIRRM), an organization based out of London, England, it is "a specialized field of medicine that focuses on identifying the underlying health conditions that contribute to reproductive dysfunction and suboptimal reproductive health, treating them to restore the natural functions of the reproductive system."[1] However, this is a component of what traditional reproductive medicine specialists do daily; we utilize diagnostic testing to identify correctable problems. We educate patients on how to optimize natural fertility.[2] And fortunately, for some patients, this is all that is required for them to achieve a healthy, live birth.

But where we diverge is our tolerance and acceptance of the use of assisted reproduction (AR) techniques, such as intrauterine insemination (IUI) and Assisted Reproductive Technology (ART). While we do our best to optimize natural fertility, we know that sometimes, it does not work. Or it cannot work. Unexplained infertility exists--as do men who have congenital absence of the vas deferens and women with salpingitis isthmica nodosa (SIN) who have had bilateral salpingectomies that necessitate the use of ART. Should these patients be excluded from realizing their dreams of building a family because they have medical issues that cannot be addressed by "restorative reproductive medicine" methods alone?

There are concerns that the emergence of RRM in the United States may threaten patient autonomy and restrict access to the full scope of reproductive medical care. Both the American Society for Reproductive Medicine (ASRM) and the American College of Obstetrics and Gynecology (ACOG) have released statements citing these apprehensions. [3, 4] In July of 2025, IIRRM released a statement in response, arguing that the ASRM and ACOG statements about RRM are misleading; it also clarifies that the organization itself is not associated with a political ideology. In this statement, RRM is presented as an alternative to IVF, or in some cases, as "supplementary or complementary." [5]

In any case, RRM neglects an entire population of individuals where it, at least in its traditional sense, is not enough. This population includes women, men and children who face the risk of iatrogenic infertility due to medical reasons, such as cancer treatment. A considerable number of these patients will experience post-treatment gonadal failure, where traditional restorative methods are ineffective.

Our field, which includes Oncofertility—offers a broad range of treatments, including fertility preservation. In addition to ART, we also offer genuinely restorative measures such as ovarian and testicular tissue cryopreservation. These methods were created with the intent of helping patients who have gonadal failure regain their reproductive function. What could be more "restorative" than this? More than 200 live births resulting from ovarian tissue transplantation have been reported.[6] While testicular tissue cryopreservation is still considered to be experimental, it is estimated that over 3000 testicular samples are stored worldwide;[7] plans are currently underway to perform the

first human testicular tissue and spermatogonial stem cell transplants, which if successful, will allow men with testicular failure to have biological children.[8]

Even better than “restoring” fertility would be to prevent infertility in the first place. Currently, we have limited options to prevent treatment-related gonadotoxicity. Ovarian suppression with GnRH agonists has been shown to reduce the risk of premature ovarian insufficiency (POI) in women with breast cancer, but it is unclear whether it results in improved fertility.[9] We are working to identify agents that can protect gonadal function through mechanisms such as 1) preventing apoptosis of primordial follicles, 2) prevent overactivation of primordial follicles, and/or 3) reducing oxidative stress.[10] Such fertoprotective agents would also have the benefit of improving overall health (such as lower risk of osteoporosis, cardiovascular disease, etc.) and wellbeing as it relates to hormonal status.

As clinicians and scientists who seek to improve the lives of men, women, and children with cancer by providing opportunities for them to have children, we should all seek to optimize treatment strategies and develop novel and innovative approaches to reach this goal. Importantly, we are also advocates and educators who care for a vulnerable group of individuals who often have limited time, opportunities, and resources to improve their chance of having a biological child. We must do our due diligence to help patients accomplish this task as safely, timely and cost-effectively as possible. This means ensuring that patients are well-informed about *all* treatment options and offered the opportunity to choose what is appropriate for them, based on their own beliefs and values.

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