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Abstracts

Invited Paper

Effects of cancer treatment on subsequent fertility

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Cancer and its treatment affect the male and female reproductive system in different ways. In males, chemotherapy and radiotherapy can deplete or damage the population of testicular stem cells leading to a reduction in the number of sperm that can be produced post-treatment. In females it can deplete the size of the population of oocytes in the ovary, effectively accelerating the menopause. Additionally, uterine radiation can impair uterine growth and blood flow in some individuals and this can impact on fetal growth during any subsequent pregnancy. Although fertility preservation strategies for post-pubertal males (sperm banking) are well established, corresponding strategies for women (i.e. egg banking) are not available. The only viable fertility preservation option is for women who are in a stable relationship to create (and store) embryos with IVF prior to cancer treatment if there is time to do so. If infertility is present in the cancer survivor, then there are a number of assisted reproductive technologies available such as intra-uterine insemination (IUI), *in vitro* fertilisation (IVF) and intra-cytoplasmic sperm injection (ICSI). If individuals are sterile post-treatment (and no sperm or embryos were stored) then donor gametes can be used if that is acceptable to the couple. Pregnancy outcomes are generally good in the cancer survivor, although there is an increased risk of low-birthweight, pre-term delivery and perinatal mortality in infants born to female cancer survivors, presumably as a consequence of the negative effects of impaired uterine growth and blood flow.
