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# Pregnancies in cancer survivors

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Successful treatment of cancer with the advent of chemotherapeutics and targeted therapy has led to increasing survival. This is specially so in childhood and adolescent cancers. Desire for a better quality of life and to relish the joy of motherhood after being free from cancer has led to more and more cancer survivors desiring children. Childhood and adolescent cancer affect nearly 2.2% of the population and the number of such cases is estimated to be close to 10 million in India [1, 2, 3]. However, such desires are not free from fear. The most common of all fears is the fear of cancer in child, followed by genetic abnormalities, safety of pregnancy and mortality during pregnancy, security of marriage and lastly the fear of disease exacerbation [4].

Fear of adverse outcome has been evaluated in number of studies and majority reported on no adverse outcome while some reported on low birth weight babies and loss of mid trimester pregnancies. Some small retrospective studies reported on minimal increased frequency of stillbirths, spontaneous abortions, and congenital abnormalities [5]. In all the incidence of adverse outcome is not worse than that in normal pregnancies.

Alterations in sex ratio of the offspring of childhood cancer survivors are thought to be an indicator of germ cell mutagenicity. However, no such alteration of sex ratio has been reported till date.

Many studies have investigated the incidence of cancer in offspring of childhood cancer survivors and, in the absence of known cancer predisposition syndromes (e.g., hereditary retinoblastoma, hereditary Wilms', Li – Fraumeni, Neurofibromatosis, etc.) virtually all studies have found no increased risk in the development of cancer. However, the incidence of cancer in offspring is high in inheritable cancer syndromes and this need to be considered when planning pregnancies in this group of patients [6]. Prenatal diagnosis offers screening and termination of pregnancies in cases where the inheritance occurs. In this group of patients, third party reproduction can also play an important role with donated ova and sperms being used for assisted reproduction.

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Currently, there are no treatments which are guaranteed to preserve fertility. The potential risks and benefits of treatment should be considered on an individual basis. Fertility preservation options can be divided into those which aim

- to reduce the impact of chemotherapy on ovarian function
- those which aim to remove and preserve ovarian tissue before starting chemotherapy and
- those which aim to produce mature oocytes or fertilized embryos for future use.

Promoting better patient education on reproductive health is important and Physicians are the best suited to introduce and initiate infertility counseling. This can also be done with Direct patient education, Peer Counseling: Sisters Peer Counseling in Reproductive Issues After Treatment, Computerized Interactive Media, and Targeted Patient Education.

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