

## LETTER to the EDITOR

**Infertility in Pediatric Cancer Survivors: A Necessary Evil or a Potentially Avoidable Sequel?***Asian Pac J Cancer Prev*, 17 (10), 4553**Dear Editor**

The term “childhood cancer” is used to designate neoplasms arising before 15 years of age (Stewart and Wild, 2014). These represent between 0.5% and 4.6% of the total number of cancer cases worldwide, being greater in countries with low human development (Stewart and Wild, 2014). Between 2008 and 2014, there was an increase of approximately 3,000 cases of childhood cancer world wide (Stewart and Wild, 2014; Boyle and Levin, 2008). The increase in these reported cases has stimulated the discovery of new and better therapeutic methods, which contributed to reach overall survival rates above 80% at 5 years of detection (Stewart and Wild, 2014; Arora et al., 2016). In the past, some authors have postulated a link between pediatric antineoplastic treatment and infertility (Fleischer et al., 2011). As a result, several studies have confirmed that adult survivors of childhood cancer are at increased risk of developing infertility due to high cytotoxicity and gonadotoxicity of chemotherapeutic agent (Reinmuth et al., 2013; Gunnes et al., 2016). For this reason, we believe that the success of its global survival should also contemplate the side effects of cancer treatments, primarily the risk of suffering infertility (Fleischer et al., 2011).

In light of this, the American Society of Clinical Oncology (Loren et al., 2013) emphasizes the importance of providing full and detailed information to cancer patients about their disease and the associated risk of infertility due to treatments. This requires oncologists to inform their patients of various techniques such as cryopreservation of ovarian cortex and sperm as methods to protect the gonadal cells in children from the long-term negative effects of antineoplastic treatment (Loren et al., 2013; Andrés and Castel, 2009). Nevertheless, the methods mentioned above are not effective for prepubertal patients, as their sperm are still immature; furthermore, it has low cost effectiveness for this population and requires a long time to complete ovarian stimulation for a live birth (Andrés and Castel, 2009).

Because of these issues, the field of pediatric oncology still faces research challenges surrounding ethical considerations and proper treatment designs. The latter must focus on decreasing the adverse effects of therapy, which could be detrimental to the quality of life of this population, as well as discovering new means of protecting gonadal cells. Different treatments are needed for each type of pediatric cancer; therefore, each one must consider the long-term adverse effects they may cause. For that reason, full disclosure of the consequences of therapy

of choice to the patient and their family should not be a mere formality; it is also necessary to involve the family responsible for the decisions made in their treatment, resulting in an ethical and empathetic doctor-patient relationship.

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