The Editorial

Cancer, A Big Monster, Which Should Be Defeated / The Editorial

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Abstract

Cancer remains a major cause of death worldwide. Huge research and identification of several markers have resulted in better understanding of its mechanism. Researches focusing on cancer stem cells and their role in metastasis will help the scientific community to propose the therapeutic approaches for treatment of this monstrous disease. Interest of governmental agencies and inter-communications of molecular biologists with clinicians can boost the new ideas in identification and characterizations of cancer stem cells. It will also help to elucidate their roles in tumor progression and hopefully would result in better ways to reduce the mortality related to cancer.

***Keywords*:** Cancer stem cells, metastasis, abnormal growth

The term "Cancer" is used for abnormal growth of cells in different organs, which can metastasize to other parts of the body. Although there has been much progress to unravel the mechanisms involved in this type of diseases, and also the progress in treatment of certain types of cancers, we are still far from finding specific and effective treatments and cancer remains a major cause of death worldwide. In Iran cancer is the third cause of death after coronary heart diseases and accidents. However, its mortality is on the rise due to increase in life expectancy and westernized lifestyle (Mousave, et al., 2008). So it is very important for us to establish better screening and diagnosis systems, as well as more effective approaches for treatment of cancer.

Research in the past decade has shown that "cancer stem cells" with self-renewal and multilineage differentiation potential (Vermeulen, et al., 2008) are responsible for the growth and relapse of many tumors. The balance between cancer stem cells and the differentiated cells in a tumor might be dependent on the tumor and its genetic background (Medema, 2013).

Since genetic background is important in both survival and metastasis of cancers (Hunter, et al., 2003; Lindström, et al., 2009) and the incidence of cancers is also different in various parts of the world, it is very important for us to focus more on samples from Iranian patients to derive cancer cell lines, isolate cancer stem cells and study their gene expression profiles, elucidate the mechanisms involved in their proliferation and differentiation and also to find better ways to fight this disease based on personalized medicine. To reach this goal, improved national funding for cancer research and also a better interaction and collaboration between scientists working in basic science and clinicians are required.

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