

Assessment of Genetic Aspects of Breast Cancer in Iranian Population : A Review Study

Atiyeh Poursadoughian Yaran ¹, Soyar Sari ^{1,*}

¹ Department of Molecular and Cellular Sciences, Faculty of Advanced Sciences & Technology, Pharmaceutical Sciences Branch, Islamic Azad University, Tehran, Iran

* Corresponding author: Soyar Sari, Department of Molecular and Cellular Sciences, Faculty of Advanced Sciences & Technology, Pharmaceutical Sciences Branch, Islamic Azad University, Tehran, Iran. E-mail: sari.s@iaups.ac.ir

DOI: 10.21859/mci-sup-23

Keywords:

BRCA1
BRCA2
Breast Cancer
Genetics
Iranian Population
P53

Abstract

Introduction: Cancer is a complex topic in the health area of the human societies, which is created by uncontrolled cell proliferation, invasion and diffusion of cells that have various origin tissues. One of the cancer that is a common among women is breast cancer. This order characterized by implantation and growth of breast tissues in the ducts and valve glands. The most usual symptom of breast disease is a new lump or mass in the breast. It is important which checked these changes by a health care provider experienced in diagnosed breast disorders. Breast cancer is a multi factorial disease that genetic factors have been noticed in patients. A large number of genes might play main role in etiology of this cancer. The purpose of this review is investigating of genetic causes of breast cancer in Iranian people.

Conclusions: According to the world health organization (WHO), the incidence of breast cancer is one in every 8-10 and one in every 10-15 women in the world and Iran, respectively. In addition, information showed that 5-10% of breast cancer is hereditary. It means genetic changes have a critical part in pathogenesis of this disease. Thousands of genetic mutation have been reported on genes that caused genome instability and resulted in other key genes such as tumor suppressor genes and oncogenes. Studies and genetic analysis on Iranian individuals presented some genes have a leading character to generate breast cancer like BRCA1, BRCA2 and P53. Iranian Scientifics discovered some types of mutation for example frameshift, missense and polymorphism with more frequencies on these genes which these variations are one of the reasons for increasing susceptibility to breast cancer. Therefore, it seems that genetic evaluation of these three genes for breast cancer in Iranian women is very essential although more studies are needed.