

Genetics of Skin Cancer Diagnostics and Treatment

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Diseases evolve side by side with human evolution and play significant role in health. Along with the societal and technological development, mankind also faces great challenges in health sector. One of these challenges is the changes in disease manifestation, its cure and obviously its effect on living organisms especially humans, which has worsen as time progresses. Some of the diseases are easily treatable now while other still poses complications. Skin cancer is one of the most common and widespread cancers despite technological and medicinal advancements and demands persistent attention. It is categorized into different types according to its location of origination and usually these cancers do not spread to other body parts. Various environmental and genetic factors contribute in its occurrence, development and metastasis. People with blonde skin tone are at supreme risk to be affected by melanoma. Considering the importance of this disease, the current review concentrates on the various types of skin tumors, its manifestations, the causes behind disease development and treatment. Genetical mutations in somatic cells or at fetus level play major role in its establishment. Furthermore, environmental factors also affect the normal cellular pathways by bringing about the alterations at gene level. Prudent analysis of the genetics may lead to better understanding of the key genes involved in its establishment and thus, the pertinent knowledge can be utilized in designing painless and accurate diagnostic approaches and advanced targeted therapies.

Upon every expose to UV radiation, hazardous material and corrosive chemicals, there is a fair chance of structural and functional alterations in skin cells, which in turn leads to skin cancer. With the passage of time, these damages become more serious and worse. Repetitive exposures further increase the cancer risk. At any age, many sun protection products help in prevention of skin cancer and melanoma [1]. Skin cancer is named after the cell type in which the cancer expands. Basal and squamous cell carcinoma are non-melanoma cancers, but melanoma is most serious type of skin cancer. Melanoma includes Merkel cell tumour and dermato-fibroses comaprotruberans. Like all cancers, early diagnosis of skin cancer results in better treatment. Area of the skin which is cancer affected looks different from the other body parts. Even a small blemish should be taken seriously, and it is significant to be checked out. Skin cancer usually looks as new blemish. Sometimes it appears as presented spot which get in different colour, shape or size [2]. In white population, Melanoma skin cancer (MSC) and Non melanoma skin cancer (NMSC) are the main types of skin cancer. Prevalence of skin cancer has attained epidemic magnitude. Recently conducted studies on population has showed that the basal cell carcinoma's incidence rate in males is over 2% while that for squamous cell carcinoma is 1%, and rate of new cases of melanoma is about 50 per 100 000 of population [3].

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