A Review on Cancer Genetic

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ABSTRACT

From the time Boveri observed that chromosomal changes are a feature of cancer, it has been thought to be a disease caused primarily by alterations in the genome of the affected cells. Today, the notion of cancer being a consequence of genetic alterations, is almost intuitive and the advances in molecular biology and genomics have given us many tools to understand and possibly to combat cancer. Since science has always existed in a continuum, the genetic alterations in cancer have to be understood in the context of cellular organization, differentiation, tissue organization host response and susceptibility angiogenesis etc.

Key words: Cancer, Genetic, chromosom, genome, lymphoid.

Introduction

The cancer is one of the usual and critical maladies in bed-head medicine. The statistics show us that cancer outbreak the most of $\frac{1}{3}$ population. It is cause of 20 percent of deceases and in the developed countries allocates most of 10 percent total medical expenditures for itself. The cancer always killer if it didn't treat.

Prematurity and proper distinction has vital and identification of privates in risk of affection to cancer before creation, constitute the important objective of cancer's researches.

In this chapter, we emphasis that cancer is a genetics’ illness basically. (Point to the inside cadre's matters).

We describe gens that interfere in cancer creation and mechanisms that by contravention them, gens can caves to illnesses.

We explain a few of cancer's syndromes with potency of heritage and show that how recognition outcome their pathogenesis become clear us the public foundation of cancer and we will pay off to explanation of difficult that these syndromes bring for medicines genetic and genetically consultation.

Cancer Identification Existence:

Cancer isn't unity illness but rather it's a name that utilize for many kind of neoplasia. It is the illness processes that result from uncontrolled multiplication of cells that terminate to neoplasm pile or tumor. For treatment that one neoplasm, treat cancer, has to malignant. It means that the tumor has invasion potency to neighbor tissue and the extension to farther region. (Metasaz giver) (The tumor that doesn’t give Metasaz, isn't cancer. But freat as benign tumor, but its size and position of location may not much benign for patient). Cancer has there chief shape that include: Sarkoms, that tumor in them appear from mezanshim's tissues like as bone, muscle and even bind. Carcinomas that origin from sheeting epithelial like as clothing garbage cells, exogenous and running of mamma and finally malignity’s connected to blood originator (Hematopoietic) and lymphoid like as losomeis and lymphomas that spread completely in marrow, lymphoid system and environmental blood.

In every one of groups, we grouping tumor on basis of location, the kind of tissue, the view of

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histology degree of malignity. Neoplasms, unnatural cells accommodation.

Had been outbreak because of imbalance between cells duplication and disappear. Them cell's duplication outcome during the cell's cycle and with Mitoz performance. Anyway disappearing them, because of planned cell's death, during a natural process of DNA segmentation and happened because of cell's feto-de-se presented to Apoptosis.

Enhancement of perturbation’s degrees accompany with gradual disappearing of tumor’s repressor gens from a few chromosome and hot up proto-ANKO gens with or without coincide defect in DNA restore action. Example, Monogamy cancer with DNA restoration defects. Has fewer out break that cancers without unnatural without restoration but when they engender, their improvement's way to final common point namely malignity, they are different but parallelism.

Genetic Roots of Cancer:

Cells division process and cell's death set by spread spectrum of gens. Vast studies in a few past decades show us that, occurrence of mutation in duplication controller and cell's death is the cause of cancer. In most of cancer, jumping in one singular somatic cell happen and then had divide and going to make a cancer. In one rarely case, when cancer out break as one part of a syndrome that is hereditary cancer syndrome, the first carcinogen jump, heritage by series of fundamental cells. And so there is all part of body cells before. Cancer by starting with every mechanism, with aggregate other genetic damages, in manner of jumping in coder gens in cell's system that recovery the damage DNA and keep the sitogenic's health, full-fledged and progressing Damage of these gens have worse circulation of jumping that affected on cell's duplication controlling and DNA damage restoration. So, real colon of Neoplastic cells can change to sub series of humorous cells with different degree of malignity that everyone comport jumping that every one is different from others. But be transferred with jumps in another subseries have commensurability with each others.

Grouping interference gens in cancer for two group is very good, They are include: Ankogens and repressive gens-tumor. Often, Ankogens are activate alleles, on series of natural gens of cell namely proto-Ankogens but they can gens such as telomerase coder or gens that can discontinue Apoptosis, too. Ankogenz, often, outcome jumping obtain actuality (See chapter11) that facilitate changing to malignity with mechanism as like as persuasion of cells multiplication, multiplication in transmitting blood to tumor and halter of Apoptosis. Repressor gens-tumor, as like that it's name showing, prevent from tumor creation with cell's growth set. Disappear the operation of coding proteins by tumor repressor gens lead to cells division and unnatural and unmoral cells growth or defective apoptosis. Often jumping happen in the division very of cells (See chapter B) and Ankogens and repressive gens of tumor haven't more ability of jumping hereditary. Kinship of other gens. Whatever that distinguished cancer’s jump from another kind of jumps is intensive reinforcement of cells multiplication and or remains preclusion cells from jump. This is exactly the phenotype of one cancer cell. As the same its name, intensive multiplication finally facility to a jumping cell to change a tracker illness. Converse that, jumps that cause to a cell lose it's operation between great numbers of cell or dead and it hasn't any phenotype's effect none. Because in one organ, losing a cell by many great health cells had cover.

Cancer in Families:

Much kind of cancers have most top break out in patient's relatives toward normal population. Between these kind of families’ cancer, nearly, there is 50 model inelegant that in them the risk of cancer is very high , it means that, in some canvers, occurrence of jump in one singular gen can origin helper agent for create a sick. The rats studies of knowing epidemic, show us that some families even without clear Mandalian heredity from cancer, they have the risk of cancer upper than the normal limit. For example, increase in detection of cancer, 2 or 3 double in the first relative of patients. It means that, often, cancers have complex adjectives that due to genetically and environmental agents (See chapter 15). So, the history of cancer between first or second degree of patient's family have to increase the doctor's guess’s about additional risk of cancer in patient. Some people talented fewer than 5 percent of all the cancers patient. The knowing of genetic of illness is very important. First of all, the families of person with strong hereditary potential, that is for jump in one singular gens, mostly, we can test and council them and depend to test result, ready the giving certainty and intensive control and treatment about them. Secondly, as like as many of widespread illness, the knowing about hereditary defect in illness will give us precise sight about illness mechanism.

If for create a malignity we need a group of jump, a hereditary jump in every one of necessary gens can influence on aptitude affection of conveyors to cancer and can responsible noticeable part of cancers, conveyors of these gens can responsible for majority of cancers cases that we don't recognize them as "families".
Ankogens:

Ankogen include a include a jumping gen that it's operation or changing lead to unnatural actuation division and cell's multiplication.

Activate jump can in ankogen, in its setting element, and or even in number of genocidal version of it lead to operation with out control or major expression Ankogen production. Ankogens in cells segment have clear effect. It means that when it activates or express very much, a singular jumpping allel is enough to change the phenotype from cell from normal situation to virulent form.

Noroblastom MYCN in 40 percent of cases of progressed stages, to 200 duble strengthening. Contrarily of invasion treatment only 30 percent of patients that suffering the progressed form of illness will live. Contrary that, reinforcement of MYCN only find 4 percent of first stage of Noroblastom and the living fortune for 3 years is for this stage is 90 percent. Reinforcement of coder gens that are aims of chemical drug proposed as a mechanism for create a drug resistance in patients that improved with chemical treatment before.

Cancer and Environment:

The risk of affection to cancer between different population and different environment show us different kind example, the volume of spread stomach cancer between Japanese that live in Japan comparison with Japanese that live in Losangeles or Havaee are most 3 double. So, it seems that noticeable park of risk to cancer depend to existence of carcinogenic environmental. Environmental careinogenic's nature, evaluation surplus age risk due to accost with these materials and ways for populations keeping contrast these damage are cases that very noticeable for people. The root contents of this chapter emphasis upon that cancer is genetically but with knowing the environment's role on cancer, it isn't contrast with this subject. Environmental agents act such as jumping material and cause the somatic jumps. Somatic jumps is cancer's agent. According to some results that often is base of data's that collect after Hiroshima and Nokazaki's atomic bombardment, it seems that 75 percent risk of cancer has environmental origin.

Outcome:

Cancer is genetically derangement that natural control of cell's growth in that is ruined. The basic mechanism in all of cancer jump, in dodemany's cell natal, and with most amplitude in somatic cells. About genetically process of cancer and environmental agents that with changing DNA lead to malignity, there are many points yet, that have to clear. New horizon about basilar roles of DNA changes in cancer lead to improvement and innovation of special ways for prevent and treatment of malignity illnesses in near future probably.

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