

Skin cancer

Business



When it comes down to it, all cancer is genetic.

It's a result of mutations or changes in the DNA sequence of our genes.

Genes can be looked at as a set of instructions that tell our cells what to do.

Our DNA sequence “spells out” our genes into letters. Mutations are basically errors in the “spelling” of our DNA codes. Most mutations, if they're minor, can be fixed by our own body cells.

Problems arise when these mutated or damaged cells begin to reproduce without restraint or when these cells suppress normal cellular growth and repair.

These “cancer genes” are classified according to their biological function which either encourages cell growth or suppresses cell growth. Proto-oncogenes normally encourage cell growth and proliferation at the appropriate time. However, when they're mutated, they function as oncogenes and continually signal cellular growth and division. Tumor suppressor genes normally function to halt cellular growth, but when they have been mutated they allow cells to proliferate uncontrollably.

Only a small amount (less than 10%) of DNA mutations can be inherited.

In the case of skin cancer, the mutations happen as a result of exposure to environmental agents like ultraviolet (UV) rays or even chemicals that people work around. Pathologically melanocytes are pigment-synthesizing cells located in the basal layer of the skin. Melanocytes produce the pigment melanin and store it in intracellular compartments called melanosomes. The overall number of melanocytes is roughly equivalent for all people; however

the level of melanin inside each melanoma and the number of melanomas inside a melanocholy varies.

The total amount of melanin is what determines the range of hair, eye and skin colors.

Ultraviolet solar radiation causes aligning changes in the skin by having direct mutagen effects on DNA, damaging DNA and suppressing optimism (programmed cell death). Melancholy's that have accumulated abnormalities in their genetic pathway develop melanoma. Risk Factors Patients affected by certain genetic conditions have an increased risk of melanoma. Risk factors include increased numbers of moles (nevi), fair hair color (red or blond), light eye color, many freckles and the inability to tan.

Other risk factors include, but are not limited to, family history, history of sunburns and the use of tanning beds.

Those at high risk should limit IV ray exposure, especially between loam and pm. They should also wear sunscreen with and SSP of at least 30, wear long-sleeved clothing, wide-brimmed hats and sunglasses. Conclusion Genetics, environmental factors and risk factors contribute to the development of melanoma. There is still a lot of controversy regarding genetic testing for specific melanoma susceptibility genes and further studies are needed. Until that time, Individuals at high risk should enter surveillance and education programs for melanoma prevention and early detection.

Bibliography Brenda L. Wilkinson, B. (2011). Malignant Melanoma. Plastic Surgical Nursing.

Meg R. Greenbelts, M. (2007). Genetic Testing for Melanoma Predisposition. Cancer Nursing.

Skin Cancer a Case Study By Gleaners Unit 4. Case Study 2: Skin Cancer in the DNA sequence of our genes. Genes can be looked at as a set of instructions that tell our cells what to do. Our DNA sequence “ spells out” our genes into letters. Mutations are basically errors in the “ spelling” of our DNA codes.

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