There are many types of diseases. From a simple cold to the deadly disease Mesothelioma. Some diseases are almost harmless and some can kill you in less than a year. There are also many cancers in the world. According to MedTerms Dictionary that published the definition in 2004, cancer means “An abnormal growth of cells which tend to proliferate in an uncontrolled way and, in some cases, to metastasize.” There is one type of cancer that is the most common. Many people don’t know how severe this cancer can get. They also don’t know how to prevent it. This type of not widely known cancer is called Skin Cancer.

What is Skin?

Skin is the largest organ in the body. Most people don’t realize how important skin really is. It heats the skin up. It also cools the skin down. It is soft and stretchy enough to allow a person to move. However, it is strong enough to keep organs in their place. Even with all of these functions the skin does not get the kind of respect it deserves.
The Layers of the Skin

There are three main layers of skin. The outermost layer is the Epidermis. This is the layer of skin that can be seen. It is very thin, only 30-50 cells thick. Even though this layer is very thin, it is formed by 5 layers. The next layer is the Dermis. This is the thickest layer of skin. The layer below the Dermis is the Hypodermis. It is usually called the subcutaneous tissue.

The Epidermis

The Epidermis is an important part of the skin. It does not have any blood vessels. There are 5 layers of the Epidermis even though it is only 30 to 50 cells thick. These include the Stratum Basale, the Stratum Spinosum, the Stratum Granulosum, the Stratum Lucidum, and the Stratum Corneum. The innermost layer, the Stratum Basale, is where new skin cells are created. These cells are called epithelial cells. They cover the body from the outside and line the organs on the inside. New Epithelial cells constantly move up the layers to replace older cells. By the time they move up to the Stratum Corneum these cells are dead.

The Dermis

The Dermis is an essential part of the skin. It is the thickest layer of skin. It cushions the body. The thickest layer of the skin also protects the body from the outside. The Dermis contains blood vessels. It also contains lymph vessels. Other structures that the Dermis contains are hair follicles. According to the Medterms dictionary a hair follicle is, “A sac from which a hair grows and into which the sebaceous (oil) glands open. The follicle is lined by cells derived from
epidermal (outside) layer of the skin.” Sweat glands can also be found in the Dermis. These regulate the body temperature which is important.

**Hypodermis (Subcutaneous Tissue)**

The third main layer of skin is the subcutaneous tissue (refer to figure 1). It is usually called the Hypodermis. It is below the Dermis. In the glands of the subcutaneous there is sebum. According to the Medterms dictionary sebum is, “An oily secretion of the sebaceous gland which helps to preserve the flexibility of the hair.” Another thing that the Hypodermis has to offer is larger blood vessels. Fat is also stored here in the Subcutaneous tissue. Connective tissue can be found here. This skin layer is very important because it regulates the temperature in the body and for the skin itself. The size of the layer will vary throughout the body and depends on the person’s skin.

**Actinic Keratosis**

Before a person develops cancer an Actinic Keratosis may form. This is like a pre-cancer. It is commonly named a sunspot. According to Connie Goldsmith’s book, “Skin Cancer” published in 2011, Actinic Keratosis is a thickening and scaling of the Skin caused by too much sunlight. Feeling Actinic Keratosis is easier then actually seeing it. This is because the colors of the thick scale of a skin are gray, pink, or red. It can even be the same color as the person’s skin! These are so common one out of six Americans can get it. However, Actinic Keratosis does not guarantee skin cancer. Actinic Keratosis is more frequent in the elderly. However, it can happen at any age.
Basal Cell Carcinoma

Basal Cell Carcinoma is the most common type of Skin Cancer. It is the least deadly type. The prognosis of Basal Cell Carcinoma (BCC) is over ninety-five percent. To be cured is very likely if it is caught early. However, if it is not taken care of the prognosis will decrease. The rate and range of people getting BCC is very high also.

According to Dermatologist Dr. Safko of Southwest Dermatology Institute he has patients with Basal Cell Carcinoma every day. He has been working as a dermatologist for thirty-two years. He also says that eighty to ninety percent of skin cancer is Basal Cell Carcinoma. This is diagnosed every year. The rate is also increasing because not many people know what skin cancer is and are not able to prevent and diagnose it. An easy to way to diagnose and prevent skin cancer will be explained later. According to Miss. Ahad who works at a dermatologist office in California, she has seen kids eight years old that have had Basal Cell Carcinoma. It can happen at any age. Skin cancer is not just a fantasy, its reality.
Where does Basal Cell Carcinoma Develop?

All cancers have a place where they originate. Basal Cell Carcinoma originates in the Stratum Basal (refer to figure 1). Connie Goldsmith’s book Skin Cancer, published in 2011 states, “Stratum Basal is the very thin layer of cells that lies at the lowest level of the epidermis. The Stratum Basal contains the Basal cells that continually make new skin cells.

Squamous Cell Carcinoma

Squamous Cell Carcinoma is the second most common type of Skin cancer. The risk factors are very similar to those of Basal Cell Carcinoma. It can occur in any area of the skin. It is most commonly found in places where there is frequent sun exposure. These are areas such as the top of the ears, the lower lips, the face, the legs, the neck, the hands, the arms, and on the scalp if the patient is bald. Squamous Cell Carcinoma is difficult to tell apart from and Actinic Keratosis or Basal Cell Carcinoma. A doctor will probably have to perform a biopsy. Squamous Cell Carcinoma have a irregular shape. They are slow growing types of tumors. They can look like warts, open sores that don’t heal, persistent, scaly, red, and irregular patches.

Where does Squamous Cell Carcinoma originate?

Squamous Cell Carcinoma has a place where it originates, just like any other cancer. Squamous Cell Carcinoma originates in Squamous Cells of the Epidermis. This is in the Pilosebaceous Glands. It is found in the Sebaceous Glands. This is where Sebum is formed. Hair
follicles can also be found here. This type of Skin Cancer can develop from an existing Actinic Keratosis.

**Melanoma**

Melanoma is the least common then the other two types of Skin Cancer that is mentioned above. It accounts for less then five percent of Skin Cancers. One in every fifty people of North European ancestry will develop Melanoma. One out of every two hundred Hispanics will develop this type of Skin Cancer. One out of every thousand African Americans will develop Melanoma. This is because they have darker skin. This means that lighter skinned people have a greater chance of developing Skin Cancer, especially Melanoma.

![Malignant Melanoma Diagnoses for 2004 by Age When Diagnosed](chart)

**Where does Melanoma Originate?**

Melanoma, just like any cancer, has an origin. Where Melanoma originates is in melanocytes. Melanocytes are cells in the basal layer of the epidermis that produce the pigment
melanin. Melanocytes in darker skinned people produce more melanin which absorbs some of the sunlight’s UV radiation. This protects DNA from damage. These melanocytes sometimes clump up to form moles. Most of these moles are benign which mean they are harmless. However, at times these moles can form into a Melanoma which, if not treated, can result in death.

Risk Factors and Causes of Skin Cancer

All cancers have a way they develop. Skin Cancer, as mentioned above, is the most common type of cancer. This is because many people don’t know the causes of this cancer, resulting in getting Basal Cell Carcinoma, Squamous Cell Carcinomas, or even Melanoma. One main cause of Skin Cancer is over exposure to the sun. Even if you are not in the sun, but go to tanning beds you are at an equal risk rate. The third main cause of Skin Cancer is genetics. If you have a history of Skin Cancer in the family then you have a higher risk. There are also other risk factors that increases your likelihood of Skin Cancer.

There many risk factors concerning the most common cancer in the United states of America. If you have lighter skin then you have a higher risk of Skin Cancer. Exposure to coal tar also increases the risk of the most common type of cancer. According to Dictionary.com Coal tar is, “a thick, black, viscid liquid formed during the distillation of coal.” Another factor that increases the risk of Skin Cancer is exposure to Creosote. According to Dictionary.com creosote is, “an oily liquid having a burning taste and a penetrating odor, obtained by the distillation of coal and wood tar, used mainly as a preservative for wood and as an antiseptic.”
Treatments of Skin Cancer

Most Cancers have treatments that either cure it or lessens the intensity. One universal treatment for cancer is Chemotherapy. In Skin Cancer this isn’t actually the first line of defense. The most used treatment for Skin Cancer is surgical removal. This is when the tumor is taken out and the body is then stitched where the tumor was. Another type of treatment that is used for Skin Cancer is radiation therapy which is similar to chemo therapy. One treatment that is specific to Melanoma is Hyperthermic Isolated Limb Perfusion (HILP). In this type of treatment the tumor must be on a limb. The surgeon will cut circulation to that limb and hook it up to a heart machine. After this the limb will be exposed to high doses of chemotherapy. However, since it is not connected to the patient’s circulatory system the whole body isn’t affected. There is a new type of treatment that is getting popular by the day.

A new type of treatment for Skin Cancer has come out. It is very effective. This treatment is called Mohs’ Surgery. Mohs’ Surgery is a type of treatment that scrapes off the tumor layer by layer. It can also burn the tumor so the the malignant tumor can die. It has only been around for a couple years. Usually a Dermopathologist does this procedure.

Research for Skin Cancer

There are also a lot of research concerning Skin Cancer. One item being researched is treatments. One of these treatments is Immunology. This is a type of treatment that strengthens the Immune System. The Immune System will then be able to track the tumor and kill it. Another type of treatment is gene therapy. What happens in this type of treatment is that genes are added
to the cancer cells. There are different ways of adding these genes. There would then kill the cancer cell because of the certain gene put into it. The third type of treatment being researched is Molecular targeting. A new drug is being researched to be able to attack abnormal genes. For example, in Melanoma Cells the gene B.R.A.F is changed. The drug would be able to track this gene and attack it.

**Prevention**

There are always ways to prevent diseases. For example, if you want to prevent a cold you can get a flu shot. Another example is, if you want to prevent polio or chickenpox you can take a vaccine for it. Skin Cancer doesn’t have a vaccine or a prescription to prevent it from happening. However, changing your everyday decisions can help you. It can prevent you from getting the most common cancer.

There are many ways to prevent Skin Cancer. One way to prevent Skin Cancer is to do one simple thing, wear sunscreen. This sunscreen should be SPF 30 or higher. It should also cover UVA and UVB rays. If it doesn’t have these characteristics it is less effective. The sunscreen only lasts for about three hours so you must reapply the sunscreen. If you swim then you must reapply the sunscreen after. Another simple thing you can do is wear a wide-brimmed hat. This covers the ear, neck and face. The third thing you may be able to do to prevent Skin cancer is to wear sunglasses that have ninety-nine to one hundred percent Ultraviolet ray absorption. This provides optimal protection for the eyes and the surrounding skin.
Who Discovered Skin Cancer?

Skin Cancer has actually been around for thousands of years. The first symptoms of Skin Cancer was experienced in Egypt, India, and China over two thousand years ago. The first tumor of Skin Cancer that was operated on was in the year seventeen eighty-seven. This operation was done by John Hunter. However he didn’t know that the Skin Cancer was Skin Cancer. He didn’t even know it was a tumor. However, René Laënnec discovered Skin Cancer in 1804. He gave a lecture about it that same year. The tumor that was removed in eighty-seven by John Hunter was so preserved that in eighteen forty Samuel Cooper examined it and discovered that it was Melanoma.

Conclusion

In conclusion, Skin Cancer is very common among the human race. If not treated it can become fatal. There are many causes of skin cancer. However simple things can prevent this cancer from developing on a person’s skin. Many people have contributed to the discovery of Skin Cancer. The three types of cancer are Basal Cell Carcinoma, Squamous cell Carcinoma, and Melanoma. All of them have cures. However these three types can reoccur. There are has been extensive research on this cancer and research is still being done on it.