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FAQs BY SKIN CANCER PATIENTS PREPARING FOR MICROSCOPICALLY CONTROLLED (MOHS) SURGERY

1. "WHAT IS SKIN CANCER?"

Skin Cancer is not one problem but a collection of separate diseases.

There are three common forms of skin cancer:

Basal Cell Carcinoma

Squamous Cell Carcinoma

Malignant Melanoma

Basal Cell Carcinoma is not only the most common form of skin cancer, but is also the most frequently occurring cancer of the human body. The name is derived from the skin cell that is growing in an uncontrolled fashion – the basal cell. This is the cell type located at the base or bottom of the upper skin layer – the epidermis. Although basal cell carcinoma can damage the skin where it appears, it rarely spreads to other parts of the body unless its size becomes exceedingly large. It does not spread throughout the bloodstream and almost never involves the lymph nodes (glands). One might think of a basal cell carcinoma as a colony of termites. If left untreated, it will destroy any tissue or structure in its path. This is of particular concern when basal cell carcinoma is located near the eye, ear, or nose. One cannot predict how quickly basal cell carcinomas will grow. Although they are usually slow-growing tumors, basal cell carcinomas can grow rapidly and spread. Basal cell carcinomas initially may have the appearance of a small pimple, non-healing or bleeding sore, a shiny bump, a cyst or a larger growth. Discomfort and itching can occur but are rare. The diagnosis of basal cell carcinoma cannot be confirmed without a biopsy or sample being sent to a pathology laboratory for microscopic examination.

Squamous Cell Carcinoma can be a more serious disease than basal cell carcinoma. The squamous cells are located above the basal layer in the epidermis. This tumor may spread to the nearby glands or lymph nodes or travel through the bloodstream to distant areas of the body. Squamous cell carcinoma usually appears as a rough, scaly plaque or larger growth.

Malignant Melanoma, which often looks like a brown or black patch, or an unusual mole, is potentially the most serious form of skin cancer. Melanoma is a cancer that begins in melanocytes, the cells that produce the skin coloring or protective pigment called melanin. Melanoma cells usually still produce melanin, which is why they usually have mixed shades of brown, tan, black or blue. If not diagnosed and treated at an early stage, melanoma cells can travel to nearby lymph nodes and internal organs, making it more difficult to treat and cure.

2. “WHY DID I GET SKIN CANCER?”

Unfortunately, we do not know most of the factors that cause skin cancer. However, skin cancer does occur more frequently in people with fair complexions (blonde hair, blue eyes), individuals of Celtic descent and those who tend to get damaging ultra-violet radiation from the sun. Over many years, normal cells of the skin may change to cancerous cells. This is why areas of the body exposed constantly to the sun (the face, hands) tend to be more prone to skin cancer than sun-protected areas. However, this is not the entire answer. Dark-skinned individuals who avoid the sun can still develop cancer. Other factors such as heredity and environmental agents may play some role.

3. “HOW CAN I PROTECT MYSELF FROM FUTURE SKIN CANCER?”

The only factor you can control is exposure to the sun. Proper use of sunscreen with a **Sun Protection Factor (SPF)** of 30 or greater is the most important preventative measure. You can also wear broad-brimmed hats or protective clothing if desired. Avoid sun exposure between 10:00 a.m. and 4:00 p.m. and sit in the shade when possible. You do not have to change your lifestyle – only use caution.

4. “HOW IS SKIN CANCER TREATED?”

Skin cancer can be treated effectively by a variety of methods, including traditional surgery, desiccation and curettage (scraping and burning), freezing (cryo-surgery), X-ray (radiation therapy) and Mohs (microscopically controlled) surgery. The treatment of skin cancer must be individualized, taking into consideration such factors as the patient’s age, location of the cancer, type of cancer and whether or not the cancer has been treated previously. In some instances, more than one type of therapy may be appropriate. But in most cases, only one or two are necessary for a particular skin cancer.

5. “WHAT IS MICROSCOPICALLY CONTROLLED (MOHS) SURGERY, AND WHY HAS MY PHYSICIAN CHOSEN THIS FORM OF TREATMENT?”

Microscopically controlled surgery was developed by Dr. F. Mohs in the 1940’s as a precise method of treating certain skin cancers. The technique has been refined in subsequent years. It combines surgical removal of the cancer with immediate microscopic examination of the removed tissue to identify cancerous tissue.

There are many indications for Mohs surgery, a few of which are listed below:

1. When the tumor occurs in an area of the body where it is not effectively curable by other methods.
2. When the tumor is located on a structure that is so important that one wishes to remove only the diseased tissue and spare as much of the normal skin as possible (e.g., the nose).
3. When the cancer has been previously treated and has come back.
4. When the margin or extent of the tumor cannot easily be defined.

5. When the cancer has an aggressive growth pattern.
6. When the cancer is of considerable size.

Mohs surgery not only has the highest cure rate of all treatment methods, but it creates the smallest possible surgical defect, permitting the best cosmetic result. Unlike other methods of treatment, Mohs surgery does not rely on surface inspection to judge the extent of the skin cancer. What one sees on the surface may only be “the tip of the iceberg.” If the tumor is not well defined, if it blends into the normal skin, or if it is mixed with scar tissue from a previous operation, a surgeon might either remove too little and leave tumor behind or overcompensate and remove too much. Mohs surgery, using microscopic control, allows the surgeon to trace out the extent of the tumor and remove only diseased tissue.

6. “WHAT DOES MOHS SURGERY INVOLVE?”

Mohs surgery is a minor surgical normally performed on an outpatient basis in the office. *Although most surgeries (including the repair of the defect) take an average 4 – 6 hours to complete, **please be prepared to spend the whole day in our office if necessary.*** Eat a full breakfast and bring snacks and some reading material. It is also **important** to bring a friend or family member along. The surgery is performed in steps or stages. Each stage involves about 15-20 minutes of surgery to remove cancerous tissue plus about 1 – 1.5 hours to check if any skin cancer remains. The number of steps or stages required depends upon the size and depth of the cancer.

The actual procedure is as follows:

1. A local anesthetic will be injected into the area of surgery. This is the only part of surgery that will cause any discomfort – the sensation of stinging or burning. Once the area is numb, a small layer of tissue will be removed. Unless the cancer is quite small, more surgery is almost always required. *Remember, it is always better to initially remove too little and perform a second stage than to remove more normal tissue than necessary.*
2. The small amount of bleeding will be stopped with a machine that coagulates the blood vessels, a dressing will be applied, and you will be moved to the waiting room.
3. This tissue will be brought back to the laboratory, where it will be examined for the presence of skin cancer. The tissue is processed, and microscope slides are prepared and examined.
4. If a microscopic examination reveals remaining tumor, a map is drawn indicating the precise location.
5. Additional anesthetic is injected to reinforce the first injection. In most cases, the initial anesthetic has not worn off and you feel little or no discomfort.
6. The second stage now involves the removal of another layer of tissue – but only where the map indicates residual cancer. The healthy tissue is left alone; only the diseased tissue is excise.

7. The tissue is brought back to the laboratory and the process is repeated until all evident cancer is removed.

The average tumor requires two stages for removal, so do not be discouraged if your cancer is not removed in one step. We are tracing the extent of the tumor very carefully and trying hard not to remove any uninvolved normal tissue. This must be done in small layers.

7. “WILL THERE BE ANY AFTER EFFECTS OF MY SURGERY?”

Discomfort, if it should occur with this procedure is usually mild and can be managed with Extra-Strength Tylenol. You may be given a stronger pain medication depending on the size and location of your wound. Do not take aspirin or aspirin-containing products (Excedrin, Anacin, etc.) **unless prescribed by your primary care physician for a cardiac or stroke history** as these can promote bleeding. A pressure dressing applied to the wound should be left on 1 – 3 days to minimize swelling and bleeding. Although some minimal bleeding is typical, brisk bleeding after surgery is infrequent. If brisk bleeding occurs, lie down, take some gauze or a dry washcloth and apply firm pressure for twenty minutes (by the clock) on the wound. Do not remove the pressure prior to this. Repeat this procedure once. If the bleeding persists, contact the on-call physician.

Other problems that may occur include black and blue marks, swelling and redness for approximately 2 months and a bumpy suture line for approximately 3 – 4 months. Rarely if the skin cancer involves nerves of the skin, surgical removal can lead to numbness or muscle weakness in the area. Numbness usually resolves in 12 – 24 months, but may occasionally be permanent.

Remember, **every** surgical procedure procedures scarring of some type. Although every attempt will be made to minimize and hide the scar, the extent of scarring depends on the size and depth of the cancer.

The main goal of Mohs surgery is to remove skin cancer as completely as possible and prevent recurrence. Although the cure rate is not 100%, it offers the highest cure rate of any available procedure. Most patients never require further treatment.

Please remember, this information provides a general guide to skin cancer and Mohs surgery. Please consult your physician if any questions arise.