

Mohs Micrographic Surgery

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***For insurance information and office locations please check my website:
www.dackomd.com***

MOHS MICROGRAPHIC SURGERY

Introduction

Mohs micrographic surgery is a specialized procedure for the removal of skin cancer. It is named after the originator of the technique, Dr. Frederick Mohs. This pamphlet was written to help you understand what Mohs micrographic surgery is and why it is recommended for the treatment of skin cancer.

Dr. Anne Dacko is a board certified dermatologist by the American Board of Dermatology and is a fellow of the American Society for Dermatologic Surgery and the American Society for Mohs Surgery. She is part of a very small number of specially trained dermatologists who perform this type of surgery in this region. This highly successful surgery is offered in an outpatient setting at several locations in Manhattan and in Kingston, N.Y. Patients who undergo this procedure do so in relative comfort and do not require a hospital visit.

I encourage patients to be as informed as possible about the surgical procedure they are considering. If you have any additional questions after reading this booklet, please contact our office.

What is skin cancer?

Skin cancer is the most common malignant tumor in humans. It is an abnormal growth of cells that expand in an unpredictable pattern on the skin. The most common types of skin cancer are basal cell carcinoma, squamous cell carcinoma and malignant melanoma. Each is named for the particular skin cell from which it originates. Basal cell and squamous cell carcinomas are commonly treated by Mohs micrographic surgery in the office. Other types of skin cancer can also be treated with Mohs surgery.

Both basal cell carcinoma and squamous cell carcinoma begin as a single point in the upper layers of the skin and slowly enlarge, spreading along the surface and downward. These extensions cannot be directly seen. The tumor often extends far beneath the surface of the skin. If not completely removed, both types of skin cancer may invade and destroy structures in their path.

Although skin cancers are locally destructive, they do not tend to metastasize (spread) to distant parts of the body. Metastasis is extremely rare in basal cell carcinoma and usually occurs only with long standing, large tumors. Squamous cell carcinoma is slightly more dangerous and patients must be observed for any spread of the tumor, though it is unlikely.

What causes skin cancer?

Excessive exposure to sunlight is the single most important factor associated with the development of skin cancer. In addition, the tendency to develop these cancers appears hereditary in certain ethnic groups, especially those with fair complexions who burn rather than tan after sun exposure. Fair skinned people develop skin cancers more frequently than dark skinned people and the more sun exposure they receive, the more likely they are to develop skin cancer. Other factors, including exposure to certain chemicals may also be involved in the development of skin cancer, but the highest incidence is found in cities such as Dallas and Miami where the sun is very intense.

How is skin cancer treated?

There are several methods for treatment including excision (surgical removal), electrodesiccation and curettage (burning and scraping), X-ray therapy, cryosurgery (freezing), topical chemotherapy and Mohs micrographic surgery. The method chosen depends on the location of the cancer, its size, type and previous treatment. Your doctor will base his/her recommendation on these factors.

What is Mohs Surgery?

About 60 years ago, Dr. Frederick Mohs developed a unique form of treatment for skin cancer called chemosurgery. Dr. Mohs applied a caustic chemical to harden the area involving the tumor so that it could be removed and traced to all of its edges. Since then, the procedure has been refined. Today, almost all cases are treated by the fresh tissue technique which omits the caustic chemical and allows dermatologists to remove all the layers of tumor in one day. Mohs micrographic surgery is a technique that allows dermatologists to selectively remove areas involved with skin cancer, while at the same time preserving the greatest amount of normal tissue as possible. If surgical repair of the wound created from the procedure is necessary, it can be done knowing that all the tumor has been removed. As a result, Mohs micrographic surgery is very useful for large tumors, tumors with indistinct borders, tumors near a vital cosmetic or functional structure (eye, nose, ear, mouth) and tumors for which other forms of therapy have failed.

What will happen at my first visit?

The first visit allows the doctor the opportunity to examine your skin cancer, obtain your medical history and determine whether the technique of Mohs surgery is the most appropriate treatment for you. It also gives you a chance to meet the doctors and staff and learn about the procedure. Your day of surgery will be explained to you in detail and the surgeon will answer all of your questions.

If your referring physician has performed a biopsy prior to the consultation, we will have received this prior to your consultation, stating the type of skin cancer that you have. If this information has not been obtained, we will perform a biopsy during the preoperative visit. The biopsy is important because it will tell us what type of cancer you have which is critical in planning the treatment. The date and time of your surgery will also be scheduled during your consultation.

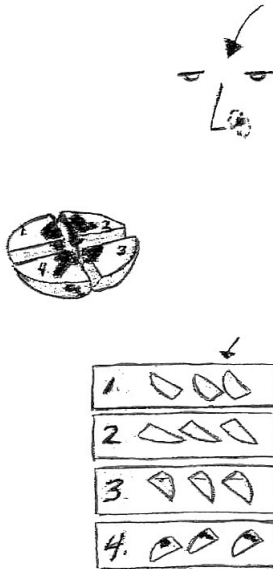
How should I prepare for surgery?

Eat your usual breakfast. If you usually skip breakfast, please have a morning snack on the day of surgery. Take all of your regular medications unless directed by your surgeon or your regular physician. If you take any medicine containing aspirin, ibuprofen, pain medications, anti-inflammatory medications, arthritis medications or blood thinners please discuss this with our office. Please inform your surgeon if you have a pacemaker, defibrillator, artificial joint or if you take antibiotics before dental procedures. Wear comfortable loose clothing that you can get in and out of easily. Avoid pull over clothing. If necessary, we may give you a hospital gown to wear during the surgery. You may also want to bring a sweater in case you are cool.

Please leave the whole day available for surgery. Surgery time can be anywhere from three to eight hours. This includes the time that is necessary for our laboratory to process your tissue and will allow you enough time to recover from the procedure. On the day of surgery, we encourage you to bring a friend or relative with you who can safely return you home and keep you company between each stage of the procedure. Bring something to read and something to eat or drink since you will be with us for several hours.

How is the surgery performed?

Mohs micrographic surgery is performed in a procedure room under sterile conditions with local anesthesia. Once anesthesia is complete, the visible portion of the tumor is removed by excision or scraping with a sharp instrument called a curette. Following the removal of most of the tumor, a thin layer, encompassing the complete undersurface of the tumor is excised. That layer is then cut into small pieces and a map is drawn to identify the location of each piece. The edges of the piece are marked with dyes to aid in the orientation on our map. Each piece is then frozen and these slices are cut, stained and examined under the microscope. Any areas in which the tumor is found are marked on the map. Regions with remaining tumor tissue are then re-excised. This procedure is repeated until no more tumor is found and the cancer is entirely removed. After each layer of tissue is obtained, oozing or bleeding vessels are cauterized or ligated with suture. A pressure dressing is applied. You may rest in the waiting area with your relative or friend.



How long does it take?

It takes 15-30 minutes to remove each layer of tissue and one or two hours to process and examine it. Most tumors require the removal of three layers. Extensive tumors may need more surgery and may require a second visit, but this is a rare occurrence.

Will Mohs micrographic surgery cure me?

If you have basal cell carcinoma, there is a 99% chance that you will be cured. If you have a squamous cell carcinoma, you can be about 95-97% certain you will be cured. However, follow-up visits to detect the rare recurrence are very important.

In addition, once you have developed one skin cancer, it is a sign that your skin has had significant sun exposure and damage. That means that you are at risk of developing more skin cancers in the future. Therefore after the initial postoperative period, it is important for you will return to your referring physician for routine skin care and cancer screening.

After the cancer is removed surgically, how will the wound be closed?

Since it is not possible to know the exact size of each wound until all the tumor is removed, we cannot determine in advance how the wound will be closed. Many wounds are superficial and can heal on their own with excellent cosmetic results. If a wound requires reconstruction, we will discuss it with you following the complete removal of the cancer. Appropriate recommendations and referrals will be made at that time.

What can I expect after surgery?

Your surgical wound will require wound care during the weeks following surgery. You will have some swelling, bruising and redness around the wound. This will gradually disappear over 10-14 days. You should plan on wearing a bandage and avoid strenuous physical activity for 1-2 weeks. You may experience a sensation of tightness across the area of surgery. Skin cancer can frequently involve nerves and months may pass before your skin sensation returns to normal. In some cases, numbness may be permanent. You may also experience itching after the wound has healed. Complete healing of the surgical scar takes place over 12-18 months. Especially during the first few months, the site may feel swollen or lumpy and there may be some redness. Gentle massage of the area (starting about one month after surgery) and keeping the area lubricated with lotion will speed the healing process.

Bleeding

Bleeding is rare, but if it occurs, apply firm pressure to the site. You will receive written instructions regarding after care of the wound. If a bulky dressing has been applied, do not remove it. Apply direct pressure to the padded wound for 15 minutes, timed by looking at a clock. Do not discontinue pressure to

see if bleeding has stopped until the 15 minutes have elapsed. If the bleeding continues, continue to press directly on the wound with an additional clean gauze pad for an additional 15 minutes. If bleeding continues, call our office or go to your local emergency room.

Pain

Mild to moderate pain is normal for a day or two following surgery, but it generally responds well to oral medication such as extra strength Tylenol. Do not use aspirin or arthritis pain medications such as Motrin, Advil or ibuprofen because they can cause bleeding. If regular pain medications are not sufficient to control the pain, please contact our office. Ice packs also help alleviate pain. Apply an ice pack for 20 minutes of each hour while resting.

How will my wound heal?

After the cancer is removed, several options may be considered for managing the wound. Some of them are:

Healing by spontaneous granulation Letting the wound heal by itself offers a good chance to observe the healing process and decreases the chance of a recurrent cancer being invisible or hidden. If at any time during the course of healing, the scar is deemed unacceptable, a cosmetic surgical procedure can be performed. Allowing wounds to heal this way is relatively painless and offers excellent cosmetic results for many body locations.

Closing the wound or part of the wound with stitches This often speeds healing and can offer good cosmetic results, especially when the scar can be hidden in a line of facial expression or wrinkling. Sutures generally remain in place for 7 days and occasionally up to two weeks depending on the location. Do not soak in a tub for the first 72 hours. Showering is allowed as long as the wound is protected.

Closing the wound with skin grafts, flap repairs or other reconstructive procedures

Recommendations or referrals for these procedures will be made if necessary. We will make the recommendations that best serve each patient's needs.

Getting the best cosmetic result

Follow the wound care instructions as directed.

Don't smoke! Smoking cuts off the blood supply to healing wounds. If you want to achieve the best cosmetic outcome it is important that you do not smoke.

Important reminders:

- Do advise us as soon as possible if you must cancel or change your appointment.
 - Do get a good night's sleep prior to surgery.
 - Do take your usual medications on schedule unless otherwise directed by your doctor.
 - Do take any new medications your Mohs surgeon prescribes for you.
 - Do eat breakfast.
 - Do consider bringing someone with you or to accompany you home.
 - Do ask any questions you may have.
 - Do not consume excessive amounts of alcohol for 5 day prior to and 48 hours after surgery. (a glass of wine is fine)
- Do not engage in strenuous physical activity for 24 hours after surgery. (No Yoga) Discuss with your doctor when you can resume strenuous activities