



Joshua E. Lane, M.D.

Tanda N. Lane, M.D.

Dermatology • Dermatologic Surgery • Mohs Micrographic Surgery (fellowship-trained) • Cutaneous Laser Surgery • Cosmetic Dermatology

PATIENT EDUCATION HANDOUT: SKIN CANCER

What is skin cancer?

Skin cancer is a common form of cancer that is seen with greater frequency as we age and with greater sun exposure. There are many types of skin cancer. The most common types include basal cell carcinoma and squamous cell carcinoma (types of non-melanoma skin cancer) and melanoma. Basal cell carcinoma is the most common type of skin cancer. A variety of methods, including Mohs surgery, excisional surgery, radiation therapy, curettage and desiccation, freezing (cryosurgery) and certain topical medications may be used to treat skin cancer. The treatment of choice depends on the tumor type, the location, and the patient.

What are the causes of skin cancer?

The cause of skin cancer, like other forms of cancer, is not entirely known. Excessive exposure to sunlight is the single most important factor associated with the development of skin cancer. Other possible factors that may contribute to the development of skin cancer include radiation, trauma and certain chemicals.

How does skin cancer begin?

Skin cancer typically begins in the upper layer of the skin and grows horizontally and/or vertically, forming a root-like growth pattern. Unfortunately, these extensions cannot be directly seen. Therefore, what is apparent to the naked eye on the surface of the skin may only be the "tip of the iceberg."

Is skin cancer dangerous?

The most common types of skin cancer include basal cell carcinoma and squamous cell carcinoma. If not completely removed, these skin cancers have the potential to invade and destroy structures in their path. Compared to other forms of cancer, these types of skin cancer (basal cell and squamous cell carcinoma) are generally recognized in the early stages and are more easily cured.

Malignant melanoma may be life-threatening if not treated early. It usually appears as a dark spot or bump on the skin, which may enlarge and/or bleed. Melanoma can begin in normal moles that have been present for many years. Therefore, it is important to look for any changes (size, shape, color, itching, bleeding, etc.) in moles.

What is Mohs micrographic surgery?

Mohs micrographic surgery (Mohs surgery) is a specialized technique utilized for the precise removal of skin cancer. It is the treatment of choice for difficult and recurrent skin cancers. Locations of the body frequently treated with Mohs surgery include eyelids, nose, lips, ears and all other areas of the head and neck. Other body sites are also treated via this technique.

There are three surgical steps to the Mohs surgery:

- 1.) Surgical removal of the visible portion of skin cancer.
- 2.) Surgical removal of a thin layer at the bed of the skin cancer.
- 3.) Examination of the excised tissue under the microscope.



By examining the tissue under the microscope, the surgeon is able to trace out and precisely locate any additional areas of remaining skin cancer. Before the tissue is examined, it is marked with colored dyes to distinguish top from bottom and right from left. By doing this, it is possible to pinpoint the exact location of any remaining tumor during microscopic examination. If more cancer is present, the procedure is repeated until it is removed. Only the area of remaining cancer is removed, thus sparing normal tissue.

Advantages of Mohs micrographic surgery

Using microscopic examination, the Mohs surgeon can pinpoint areas involved with skin cancer and selectively remove only those areas. This way, the skin cancer is traced out to its roots. This results in two distinct advantages of Mohs surgery:

- 1.) Mohs surgery preserves as much normal tissue as possible
- 2.) Mohs surgery has the highest chance for cure compared to other treatment options

Using the Mohs technique, the percentage of success is very high, often 97 to 99%, even if previous treatment modalities failed. With this technique, an excellent chance of cure is achieved. However, no one can guarantee a 100% chance of cure.

A frequent reason for being referred for Mohs surgery is that other forms of treatment have failed. This does not mean that you are cancer-prone or have a hopeless case. It merely means that previous methods used to treat your skin cancer in the past did not destroy all the skin cancer cells. Because Mohs surgery uses complete systematic microscopic control to detect the roots of the skin cancer, it cures almost all patients, even those in whom skin cancer has persisted in spite of several other treatments. This is also important to treat skin cancers in areas where preserving healthy tissue is important, such as the eyelid, lip, ear, nose and other sites.

The Mohs micrographic surgery unit

The Mohs surgery unit consists of several individuals who will assist you. In addition to Dr. Lane, the team includes surgical assistants who are experienced in working with patients with skin cancer, laboratory technicians who prepare the tissue for microscopic examination and other office staff.

Does my insurance cover Mohs micrographic surgery?

Mohs surgery is typically an outpatient surgery. We accept Medicare Part B assignment, which should reimburse charges at 80% of Medicare's allowed amount. If you have a supplemental policy, it will also be filed and usually pays the remaining portion of your bill. For those who do not yet have Medicare, the amount that your policy will pay toward the cost of surgery varies with the type of policy that you have. If you have any questions concerning this, please discuss this with our billing staff.

The preoperative visit

The preoperative visit allows Dr. Lane the opportunity to examine the skin cancer, obtain your medical history and determine whether the Mohs surgery technique is the best technique to treat your skin cancer. Also, it gives you the opportunity to learn more about the procedure. Every skin cancer is different and because of the high demand for Mohs surgery, careful scheduling is required.



A date for surgery that is mutually acceptable will be arranged. Patients referred to us from out of town may be scheduled for surgery at the time of their initial visit. When patients are referred to us, usually a biopsy (removal of piece of tissue) has already been performed and a pathology report stating the type of skin cancer is available. If we do not have this information, a biopsy may be performed at the time of the initial visit. Since all skin cancers are not alike, we decide how best to proceed with the biopsy information. The skin cancer and surrounding skin may be photographed before treatment as well as immediately after surgery and then again after healing. These photographs become part of your medical record and may be used for teaching purposes.

The highest chance of cure: Mohs micrographic surgery

Mohs micrographic surgery provides patients the highest chance for cure even with complicated skin cancers. Since this method is highly specialized, only a few medical centers in Georgia are equipped with the personnel and training to offer this treatment. Mohs surgery is performed by a board-certified dermatologist who has completed an approved surgical fellowship of 1 to 2 years following a 3 year dermatology residency. Dr. Lane completed his Mohs micrographic surgery fellowship in Macon, Georgia. He is one of only 32 fellowship-trained Mohs surgeons in Georgia.

The day of surgery

Appointments for surgery are usually scheduled early in the day. When you arrive for surgery, the surgical assistant will take you to the surgery suite and prepare the involved areas of the skin (tissue) containing the skin cancer. After you are admitted by Dr. Lane's nursing staff, Dr. Lane will confirm the location of the skin cancer and then the area is gently anesthetized with local anesthetic. The skin containing the cancer will be carefully removed and any bleeding stopped. A surgical assistant will cover your wound with a bandage and escort you to the designated waiting area.

It will take approximately 30 minutes to prepare the tissue for microscopic examination. While you are waiting, you may go to the restroom. If examination of the tissue reveals that your tissue still contains cancer cells, the procedure will be repeated that day until it is completely removed. Several excisions and microscopic evaluations may be done in one day. It is seldom necessary for you to return the following day for additional surgery. The average number of surgical sessions for most skin cancers is 2 to 3. Most patients have their entire skin cancer removed by mid-day. However, many are cleared after the first stage.

Getting ready for Mohs micrographic surgery

Try to get a good night of rest and eat a good breakfast. As for your medications, **please bring all of your medications in their original containers and/or a complete list of your medications. Please continue to take all of your medications as directed unless otherwise directed.** If you are taking arthritis medicine such as aspirin, Advil, BC powder, etc. and only for arthritis or aches/pains, please do not take this medication for 14 days prior to your scheduled surgery. These medications may result in excessive bleeding.

If you are taking aspirin for your heart, any history of stroke or other reason directed by your doctor, DO NOT stop them. If you are taking blood thinners (Plavix, Coumadin, Persantine, etc.), continue to take these medications unless you are specifically told by our office to stop them. Please call our office if you have any questions. Remember, there are no silly questions – only unanswered questions.

You may also want to bring a jacket or sweater (NOT pullover) in case you get cold as we keep the temperature slightly cool. The procedure may take a full day, much of which you will spend in the waiting room. Please do



not drink alcoholic beverages prior to your surgery. Alcohol causes blood vessels to dilate and aggravates bleeding problems. If you smoke, if possible please stop for 2 weeks before and 2 weeks after as this may interfere with healing. If you cannot stop smoking, try to smoke less than ½ pack a day. It may be relaxing to have company while you are sitting in the waiting room. It is recommended that you have someone drive you home. We ask that you limit the number of persons accompanying you to one or two persons because of the limited space in our waiting room. Also, it is helpful NOT to wear makeup if the skin cancer is on the face.

The surgical wound

Once the skin cancer has been completely removed, a decision is made on the best method for treating the wound created by the surgery. These methods include:

- 1.) closing the wound with stitches
- 2.) closing the wound with a skin graft
- 3.) closing the wound with a skin flap
- 4.) letting the wound heal by itself

We will recommend the method that is best suited for your individual case. Repairs may be completed by us or by other surgical specialists. Each patient is unique and we must individualize your treatment to achieve the best result. You may experience a sensation of tightness as the wound heals but this is normal. As time progresses, you will feel this less and less. Frequently, skin cancers involve nerves and it may be one or two years before your complete sensation returns to normal. In some cases, numbness may be permanent. Any form of therapy will leave a scar. The Mohs procedure tends to minimize this as much as possible. We make every effort to obtain the optimal cosmetic result for you and to work in conjunction with other surgical specialists in the field of cosmetic and cutaneous reconstructive surgery.

The new skin that grows over the wound contains many more blood vessels than the skin that was removed. This results in a red scar and the area may be sensitive to temperature changes. This sensitivity improves with time and the redness gradually fades. If you are having discomfort, avoid extreme temperatures. You may experience itching after your wound heals because the new skin does not contain as many oil glands. Petroleum jelly or mild moisturizers will help to relieve this itching. Do NOT apply anything to your surgical site for the first month after healing is complete.

Follow-up after Mohs micrographic surgery

A follow-up period of at least 5 years is essential after the wound is cleared. After the wound is healed, you will be asked to return for appropriate follow-up visits. Your follow-up may be handled by your referring physician. Should there be any recurrence, it usually will be within the first year of surgery. Studies have shown that once you develop a skin cancer, there is a possibility that you will develop others in the years ahead.

We recommend that you be seen at least once yearly by your referring physician or dermatologist so that he/she may evaluate whether you have developed any new skin cancers. Should you notice any suspicious areas, it is best to check with your physician to see if a skin biopsy is indicated.

Sun exposure after Mohs micrographic surgery

Sunlight is probably the primary contributing factor in the development of skin cancer. Patients who have developed one skin cancer often will develop more at a later time. When you are in the sun, we recommend that



you liberally apply sunscreen with a protection factor of at least 15 (SPF 15) to all exposed areas, including the tops of your ears. It is best to apply sunscreen about 15 minutes before going outdoors. It is also important to reapply liberally after swimming or exercising as most sunscreens wash off with water or perspiration. In addition to sunscreen, you may wish to protect yourself with hats and protective clothing.

Summary of important points to prepare for Mohs micrographic surgery

- 1.) **Confirmation of appointment** – our office will call you the week prior to confirm your appointment. It is the patient's responsibility to confirm both the date and time of their surgical appointment. If an emergency occurs and you need to reschedule your appointment, please call our office as soon as possible (706.322.1717). Bring a light jacket or non-pullover sweater.
- 2.) **Medication** – it is absolutely necessary that you bring any medication or an accurate list of each medication including the dose and number of times each day you take it. If you are unsure, please call your doctor to confirm this. You may have your primary doctor fax a copy of your medication list and any other important information to our office (fax: 706.322.1718).
- 3.) **Blood thinners** – If you take aspirin, aspirin-like products, Coumadin, Plavix, Persantine, or any other arthritis medications, please make sure that we have this information. If it is necessary to stop these medications before surgery, we will inform you. We may need to check with your primary doctor first. Please see the attached list of aspirin-containing/acting medications.
- 4.) **Questions regarding surgery** – please remember that there are no silly questions – only unanswered questions, so please let me know if you or your family have any questions. It is our privilege to provide surgical care to our patients and family. Should you have any concerns that we have not completely answered, please let our staff or Dr. Lane know. Thank you for allowing us to be a part of your care.