

## Mohs' Micrographic Surgery

<b>Appointment Date:</b>	<b>Arrival time:</b>
<b>Your appointment is scheduled at our location checked below:</b>	
7658 <b>Iar Pike, Germantown, TN 38138</b>	
7659 <b>7203 Goodman Road, Olive Branch, MS 38654</b>	
5349 <b>Airline Road, Arlington, TN 38002</b>	
<b>Phone: 901-759-2322   <a href="http://www.advanceddermatologymemphis.com">www.advanceddermatologymemphis.com</a></b>	

### Introduction

In 1937, Dr. Fredrich Mohs, Professor of Surgery at the University of Wisconsin, and Nobel Prize in Medicine nominee, developed a technique for the surgical removal of skin cancers known as chemosurgery. This technique provides patients with the highest chance of cure for even complicated cancers. However, since this method is time-consuming, requires highly specialized training and personnel, only the major medical centers in the United States are equipped to offer this treatment. Dr. Patel trained with Dr. McCall at the University of Louisville, in Louisville Kentucky. Dr. McCall is a direct trainee of Dr. Mohs, and is the first physician to bring the technique to Kentucky. Dr. Jefferson trained in micrographic surgery and dermatologic oncology at the University of British Columbia, and completed her dermatology residency at The Johns Hopkins Hospital. Dr. Patel and Dr. Jefferson have done tens of thousands of skin cancer procedures. The large number of cases which have been cured demonstrates that Mohs' surgery is the most successful method of treatment for skin cancer.

This information pamphlet will attempt to answer some of the questions you may have as a patient concerning your procedure for the treatment of skin cancer. Should you have any further questions, please do not hesitate to contact us.

The Micrographic Surgery Unit consists of several individuals who will serve you. In addition to Dr. Patel, the team includes surgical assistants who are experienced in dealing with skin cancer patients and knowledgeable about and experienced in caring for any

problems that may arise. Another important member of our team is the technicians who quickly and precisely prepare the tissue for microscopic examination. Finally, the office secretaries and office manager round out the team.

**(1) What is skin cancer?**

Cancer is a tissue which grows at an uncontrollable and unpredictable rate. There are three main forms of skin cancer; basal cell carcinoma, squamous cell carcinoma, and malignant melanoma. These names refer to the cells of the skin giving origin to the cancer.

**(2) Is it dangerous?**

The most common types of skin cancer are basal cell carcinoma and squamous cell carcinoma. Both types enlarge locally from the point of origin and usually do not spread (metastasize) to distant parts of the body. If not completely removed, both types will frequently invade and destroy structures in their path of growth. Compared to other forms of cancer, these types of skin cancer are generally recognized in their early stages and are, therefore, more easily cured. Malignant melanoma, on the other hand, may be life-threatening if not treated early. It usually appears as a brownish-black spot or bump on the skin which enlarges and sometimes bleeds. Occasionally, melanoma originate in moles which have been present for many years.

**(3) What causes skin cancer?**

The cause of skin cancer, like other forms of cancer, is not completely known. Excessive exposure to sunlight is the single most important factor associated with the development of these skin cancers which appear most commonly on the face and arms (the most sun-exposed areas of the body). Fair-skinned people develop skin cancers more frequently than dark skinned people. Skin cancer, unlike cancer of other forms is rare in African Americans. Cancers of the skin are common in the southern United States. Skin cancers also tend to be hereditary and occur frequently in certain ethnic groups, especially those with fair complexions, such as Northern Italians and people from Northern Europe. Other possible factors contributing to the development of skin cancer includes x-ray, trauma, and certain chemicals.

**(4) How does skin cancer start?**

Skin cancer begins in the upper-most layer of the skin and grows downward

forming roots and spreads horizontally, along the surface of the skin. Unfortunately, these extensions cannot be directly visualized. Therefore, what is apparent to the naked eye on the surface of the skin may be the “tip of the iceberg”.

**(5) How is it removed?**

There are three separate steps in the removal of skin cancer by Mohs' Micrographic Surgery: (1) surgical removal of the visible portion of the skin cancer with excision or curettage; (2) surgical removal of a thin layer of tissue at the bed of the cancer; and (3) examination of the excised tissue under the microscope. By the through examination of the bottom portion of the removed tissue, the physician is able to trace out and exactly locate any additional areas for cancer left in the patient. Before this tissue is examined it is marked with colored dyes to distinguish top from bottom and right from left. By doing this, we are able to pinpoint the exact location of any remaining tumor during the microscopic examination. If more cancer is present, the procedure is repeated but only in the area of remaining cancer is removed.

**(6) How long does it take?**

Total removal of a skin cancer, which may involve several surgical sessions with waiting periods between, is usually completed in one day. After the surgery, a decision is made as to the best way to manage the wound created by the surgery. This will be discussed later.

**(7) How effective is Mohs' Micrographic Surgery in the treatment of skin cancer?**

Using the micrographic surgical technique, the percentage of success is very high; often 97 to 99 percent for basal cell carcinomas even if other forms of treatment have failed. Therefore, with this technique, an excellent chance of cure can be achieved; however, no one can guarantee a 100 cure.

**(8) What are the advantages of Mohs' Micrographic Surgery?**

(1) Using microscopic examination, the microscopic surgeon can pinpoint areas involved with cancer selectively remove only those areas. In this way, the skin cancer is traced out to its roots. This results in the removal of as little normal tissue as possible and the highest chance of cure. Other forms of therapy frequently have only a 50% to 70% chance of success in curing skin cancers that have been previously unsuccessfully treated. (2) It is safe and has a significantly higher cure rate than any other available technique in dealing with the most difficult cases.

**(9) Will the surgery leave a scar?**

Yes. Any form of therapy will leave a scar; however, the Mohs' Micrographic Surgery procedure tends to minimize this as much as possible. This is because Mohs' Micrographic Surgeons try to remove only those tissues involved with cancer and preserve all the normal tissue possible. We make every effort to obtain an optimal cosmetic result for the patient and may work in conjunction with a plastic surgeon if necessary.

**(10) How much does the surgery cost and will my insurance pay?**

Micrographic Surgery is outpatient surgery just as if it were performed in a hospital outpatient clinic. Medicare accepts almost all our total charge and will reimburse you 80% of their accepted charge. If you have a second insurance policy or co-insurance this should pay the major portion of the remaining bill. For those who do not yet have Medicare, the amount that your policy that covers you. If you should have any questions concerning this, you should discuss this with your doctor. The surgery is fairly expensive since it requires us to maintain our own surgical suite and lab. There will be no separate charge, however, for the use of the surgical suite or the lab, which would be customary if the surgery were to be carried out in an outpatient surgery center or hospital. Please check with our staff if you have any questions regarding cost or insurance forms. We will be glad to help you file your insurance and Medicare claims; however, the patient will be responsible for any balance not covered by insurance.

**(11) What happens at the pre-operative visit?**

The pre-operative visit gives our surgeons the opportunity to examine your skin cancer, take any pertinent history, and determine whether the technique of surgery is the most suitable way of treating your skin cancer. Also, it gives you an opportunity to learn about the procedure. Every skin cancer is different, and because of the high demand for Mohs' Micrographic Surgery, careful scheduling is necessary. A suitable 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 the patient has been referred to us, usually a biopsy (removal of a piece of tissue) has been performed and we have a pathology report stating the type of skin cancer present. If we do not have this information, we usually will perform a biopsy at the initial visit. Since all skin cancers are not alike, we need to know exactly what type you have before we can decide how to proceed. Almost all patients will be photographed before treatments as well as immediately after

surgery and again after healing. These photographs become a part of your medical record and may be used for teaching purposes.

(12) **Will I need to be hospitalized?**

Whenever possible, the surgery is performed as an outpatient procedure in the office. Occasionally we require that the patient stay in the hospital. We will inform you if we feel it would be best for you to be hospitalized at the time of your initial visit.

(13) **How should I prepare myself for Mohs' Micrographic Surgery?**

Try to get a good night's rest and eat a good breakfast. If you are taking any medications, take them as usual unless we direct otherwise. Dress warm or bring a blanket, as the lab area is very cold. It is a good idea to bring a book or magazine with you on the day of surgery. The procedure may take a full day, much of which you will spend in a waiting room. Please, no alcoholic beverages since they cause blood vessels to dilate and aggravate the problem.

(14) **How long does the surgery take?**

Each step or stage of the surgical procedure takes about 30 minutes. Following the surgery, it usually takes over one hour for the slides to be prepared for microscopic examination. Several surgical stages and microscopic examination may be required.

(15) **Should someone come with me on the day of surgery?**

It may be pleasant to have company while you are sitting in the waiting room and it is recommended that you have someone drive you home. We ask that you limit the number of people accompanying you to two people because of the limited area in the waiting room. **No children please.**

(16) **Does it hurt?**

A local anesthetic will be used, usually xylocaine, to numb the area around the cancer. Be sure to inform us if you experience anything more than a slight discomfort.

**(17) What happens on the day of surgery?**

Appointments for surgery are usually scheduled early in the day. This allows us to continue through the entire day if necessary. After you arrive for surgery, an assistant will take you to the surgery suite and prepare the area to be removed. If you have any questions, this is a good time to ask them. Next the area will be anesthetized and then Dr. Patel will remove a thin layer of the skin involved with the cancer. After this tissue has been carefully removed, the bleeding will be stopped with a cauterizing machine which generates some heat. Before you leave the surgical suite, the nurse will dress the wound. The removed tissue will be sent to the lab for examination. It usually takes 15 to 30 minutes to anesthetize the involved area and to remove the tissue. It will take approximately 1 ½ to 2 hours to prepare the tissue for microscopic examination. While you are waiting, you are free to leave the area for refreshments. If examination of the tissue removed reveals that your tissue still contains cancer cells in the surgical site, the procedure will be repeated as soon as possible. Several surgical excisions and micrographic examinations may be performed in one day. Seldom is it necessary for the patient to return to the following day for additional surgery.

**(18) How many surgical sessions are there?**

The average number of surgical sessions for most skin cancers is two to three, so most patients are finished by mid-afternoon. When we have determined that the skin cancer has been completely removed, a decision is made on what to do with wound created by the surgery. Usually there are three choices: (1) to close the wound with stitches; (2) to let the wound heal by itself; (3) to close the wound by skin graft. We will recommend which of these choices will be best for your individual care.

**(19) What happens after the wound is healed?**

You may experience a sensation of tightness or drawing as the wound heals, but this is normal. After several months, you will feel this less and less. Frequently, tumors involve nerves and it may take up to one year or even two, before feeling returns to normal or near normal. Sometimes the area stays numb permanently. Only time will tell. 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. However, if you are having a lot of discomfort, try to avoid extreme temperatures. Patients frequently

experience itching after their wound had healed because the new skin that covers the wound does not contain as many oil glands as previously existed. Plain petroleum jelly or other skin moisturizers will help relieve the itching.

(20) **Once the wound has healed, how often must I return for a follow up?**

A follow up period of observation for at least five years is essential after the wound has healed. Our practice is to have patients return to their referring physician for yearly visits. Patients initially seen in our office will return here. Should there be any reoccurrence of the skin cancer after the micrographic surgery, it may be detected at once and treated. Experience has shown that if there is a reoccurrence, it usually will be within the first year of surgery. Studies have shown that once you develop skin cancer, there is a possibility that you will develop others in the years ahead. We recommend that you be seen at least once a year for the rest of your life by your dermatologist so that he or she may determine whether you have developed new skin cancers. Also, should you yourself notice any suspicious areas on your skin, it is best to check with your referring physician to see if a biopsy is indicated.

(21) **My skin cancer has been treated several times. Will it ever be cured?**

A frequent reason for being sent to us for micrographic surgery is that other forms of treatment have failed. This does not mean that you have a hopeless case. It merely means that the methods used to treat you in the past were not as effective enough to destroy all of your skin cancer cells. Because Mohs' Micrographic Surgery used complete systematic microscopic control to search out the roots of cancer, it cures almost all patients-even those in whom skin cancer has persisted in spite of several other treatments.

(22) **Later on must I avoid the sun?**

No, not entirely. We do not think that sunshine will be harmful to you as long as you provide yourself with adequate protection, avoid burning, and use discretion. As mentioned earlier, sunlight probably is the main contributing factor in the development of skin cancer, and patients who have developed one skin cancer often will develop more at a later time. Therefore, in the future, when you go into the sun, we recommend that you liberally apply a sunscreen with a protection factor of 15 or greater to all exposed areas, including the tops of the ears. It is best to reapply the sunscreen about 20 minutes before going outdoors. Be sure to reapply it liberally after swimming or exercising since most sunscreens wash off with water or perspiration. In addition to a sunscreen, you may wish to wear a brimmed hat and

utilize clothing to further protect yourself from the sun. Yes, you may lead a normal life style if you take the precautions. Remember, an ounce of prevention is worth a pound of cure.

### **Summary**

Mohs' Micrographic Surgery provides the greatest chance of cure for even the most complicated skin cancers. Using this surgical technique, we are able to spare as much normal skin as possible so that we have maximum amount of tissue for good healing. Since this procedure is carried out under local anesthesia, the risk for the patient is quite small, even in those who have other complicated illnesses. The wound healing from this surgery is usually excellent but if further cosmetic surgery is necessary, we are able to work closely with several excellent plastic surgeons in the area.

If you should have any questions or problems, do not hesitate to contact Dr. Patel at any time.

Our office will assist you in preparing and/or filing your insurance. Please bring all your identity cards and forms with you.