

CARSON DERMATOLOGY ASSOCIATES

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MOHS MICROGRAPHIC SURGERY

SKIN CANCER

There are three common types of skin cancer:

- 1) Basal Cell Carcinoma (BCC) is the most common and easily cured. It almost never spreads internally. It does, however, spread locally and can destroy normal structures in its path.
- 2) Squamous Cell Carcinoma (SCC) is less common. It is usually slow growing and locally destructive; but in unusual situations or if neglected, this tumor may spread internally by metastasizing.
- 3) Malignant Melanoma (MM) is very uncommon but of concern because it possesses a moderate potential for distant spread. If this tumor does spread, there are no proven effective treatments.

MOHS SURGERY

This technique for treating difficult skin tumors was originally developed by Dr. Fredrich Mohs and later refined by Dr. Stegman and Tromovitch of the University of California where Dr. Clemmensen trained.

Originally the treatment was referred to as Mohs Chemosurgery, but is now call Mohs Micrographic Surgery for its reliance on the reliance on the surgeon's microscopic examination of frozen tissue specimens.

Obvious tumor is excised (almost always with local anesthesia) with a small margin of additional skin. The entire specimen is then frozen and prepared for the microscope where the complete margin is then checked for any evidence of remaining tumor. A clear margin is usually confirmed, but if any tumor is seen at the edge of the excision, its location is precisely determined with the use of tissue maps and dyes. An additional margin of skin is then removed and also examined. Complete treatment usually requires one or two stages, but in large or difficult tumors more stages may be required. Generally the entire treatment can be completed in one visit to the office.

WHAT ARE THE ADVANTAGES OF MOHS SURGERY?

Since the tumor can be removed with great precision, it is possible to confirm its complete treatment at the time of surgery with the removal of a minimal amount of healthy tissue. Mohs surgery not only conserves healthy tissue, it also offers the highest cure rates for most types of skin cancer.

SKIN CANCER AND DISEASES OF THE SKIN
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WHY NOT USE MOHS SURGERY FOR ALL SKIN CANCERS?

This type of surgery can be relatively complex and time consuming. Most small, non-complicated skin cancers are best removed by more economical surgical excision offering good cure rates.

WHICH SKIN CANCERS NEED MOHS SURGERY?

Skin tumors with a higher risk of recurrence, those that may have already recurred, and those located in critical areas such as eyelids, nose, lips and ears where tissue conservation is especially important are generally considered for Mohs surgery. Occasionally a biopsy will show a more aggressive type of skin cancer best treated by the Mohs technique.

WHAT ALTERNATIVE TREATMENTS ARE AVAILABLE FOR SKIN CANCER?

Simple excision, cryosurgery, and radiation are also used to treat skin cancer. These options generally offer significantly lower cure rates for the difficult skin cancers. The alternative of no treatment also exists, but the consequences of this choice can be costly!

WILL THERE BE A LARGE DEFECT IN THE SKIN AFTER SURGERY?

This depends entirely on the size and extent of the cancer removed. If the tumor has spread extensively, the defect may be sizeable.

HOW IS THE DEFECT REPAIRED?

This will be addressed immediately after complete removal of the tumor is confirmed, almost always on the same day. Sometimes the defect can be closed directly with sutures, sometimes a reconstructive procedure utilizing a skin flap or, graft is utilized, and sometimes the defect will heal nicely without any further treatment. Rarely a staged repair requiring several additional procedures spread over weeks to months may be required. In almost all cases the repair will be accomplished in our office, but in some cases it may be necessary to refer you for additional treatment by another specialist.

WILL THERE BE MUCH PAIN?

Your treatment will be carried out under local anesthesia (Lidocaine) which blocks all pain. There will be some pain associated with the initial injection of anesthetic. There will also be mild to moderate pain beginning several hours after surgery and usually resolving in 24 - 48 hours. Acetaminophen is usually adequate for pain control.

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WHAT ARE THE CHANCES THE CANCER MAY RECUR AFTER MOHS SURGERY?

This may vary somewhat depending on size, location and history of the tumor; but for basal cell carcinoma 95-99 of 100 patients are cured.

WHAT ARE THE RISKS OF MOHS SURGERY?

There are risks associated with any form of surgery. Since Mohs surgery is performed as an outpatient with local anesthesia, it is safer than most forms of surgery.

Bleeding, infection, or nerve injury may occur with any form of skin surgery. Fortunately, these are rarely a problem with Mohs surgery.

After surgery there will be a scar, but we use reconstructive and plastic surgery techniques to minimize and hide scars as much as possible. Scars mature and fade considerably over time. Rarely a surgical revision can be performed to improve scars.

WHAT WOULD HAPPEN IF I CHOOSE TO DO NOTHING?

Most BCC and SCC tumors grow slowly so things may seem fine for a while. However, the tumor will enlarge insidiously and eventually produce problems such as pain and bleeding. With time, most tumors gradually burrow deeply into the body and if neglected some can spread to distant sites.

HOW SHOULD I PREPARE FOR THE SURGERY?

Avoid all aspirin (Empirin, Excedrin, Bayer, Anacin, and others) for at least 10 days before your surgery. Ibuprofen and Aleve should be avoided for 5 days - these products will increase bleeding complications. Tylenol (Acetaminophen) is OK! Avoid coffee and caffeine the morning of surgery (they may increase pain and anxiety). Eat a normal breakfast. You may be in the office most of the day. Wear comfortable clothing; a shirt or blouse that buttons rather than a pullover is best. Since you may spend most of the time waiting for the laboratory preparation and examination of specimens, you may wish to bring a good book. We recommend you arrange a ride to and from the office as you may be fatigued by the treatment.

WHAT SHOULD I EXPECT ON THE DAY OF SURGERY?

After the nurse brings you to the treatment room, photographs may be taken, the skin is cleansed and the numbing medicine is injected. Usually you will be fully awake, but if you wish some medication for sedation, this can be arranged-provided you will not be driving. After the area is numbed, the tumor will be removed for the laboratory. This usually takes only a short time and a temporary dressing will be applied and you will be returned to a waiting area. The tissue removed will then be processed and examined (takes 30-60 minutes). If more tumor removal is required, the entire process is repeated except you will probably still be numb. Once we are sure the entire tumor has been removed, we will discuss what kind of repair, if any, is needed. This will usually be performed at that time. After the repair, a dressing will be applied, you will be given instructions for care and you will be discharged to go home. If you have traveled a considerable distance for your treatment, it may be wise to remain in the Carson area the first night should you have any minor complications.

WHAT CARE IS REQUIRED AFTER SURGERY?

The dressing may be left in place 1 to 5 days depending on the type of repair. During this time the area must be kept absolutely dry. Immediately after removing the dressing there may be some blood on the skin - this is best removed with hydrogen peroxide or mild' soap and water. After dressing removal the area should be washed gently several times daily and an antibiotic ointment applied. Sutures are generally removed in 5 - 7 days (if you are several hours from the office, this can often be accomplished by your local physician).

WILL I HAVE TO PAY AT THE TIME OF SURGERY / WILL IT BE EXPENSIVE?

We need to be compensated in order to be able to continue to provide this treatment, but you will not be asked to pay on the day of your treatment - unless you will not be returning to our office for follow up care. We will help in billing your insurance and participate in many plans - ask our staff about your particular plan. If you have no insurance, we can arrange any reasonable payment schedule for you and offer a discount for full payment.

Relative to other treatments such as radiation or hospital surgery centers, Mohs is not costly. Depending on the complexity of the tumor removal costs may vary from approximately \$700 - \$2000. Reconstruction procedures are considered in addition to the Mohs surgery and vary depending on the procedure but are considerably less costly when we are able to perform them in the office rather than a surgery center or hospital. If you have any additional questions, we will happily attempt answers either before, or on the day of your surgery.

**THIS SURGERY COULD TAKE ANYWHERE FROM 2-6 HOURS SO PLEASE
MAKE ARRANGEMENTS ACCORDINGLY.**

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