



CARSON
DERMATOLOGY
SKIN CANCER TREATMENT CENTER

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MOHS - MICROGRAPHIC SURGERY

SKIN CANCER:

These are the common types of skin cancer for the MOHS procedure:

- 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. In some situations if neglected, this tumor may spread internally by metastasizing.

Mohs micrographic surgery is a specialized, highly effective technique for the removal of skin cancer. The procedure was developed in the 1930's by Dr. Frederic Mohs at the University of Wisconsin and is now practiced throughout the world. Mohs surgery differs from other skin cancer treatments in that it permits the immediate and complete microscopic examination of the removed cancerous tissue, so that all "roots" and extensions of the cancer can be eliminated. Due to the methodical manner in which the tissue is removed and examined, Mohs surgery has been recognized as the skin cancer treatment with the highest reported cure rate.

Obvious tumor is excised (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 or throughout, 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.

ADVANTAGES OF THE MOHS PROCEDURE:

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

types of skin cancer. It results in smaller defects and allows for more cosmetic repairs.

SPECIAL INDICATIONS FOR MOHS SURGERY:

This type of surgery can be relatively complex and time consuming. Most small, non-complicated skin cancers are best removed by more economical surgical interventions and offer 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, ears, hands, feet, scalp and where tissue conservation is especially important. Occasionally a biopsy will show a more aggressive type of skin cancer best treated by the Mohs technique.

INSURANCE COVERAGE FOR MOHS SURGERY

Most insurance policies cover the cost of Mohs surgery and the reconstruction of the resulted surgical defect. Please contact our billing department if you have any questions or concerns regarding your coverage.

HOW IS THE SURGICAL DEFECT REPAIRED:

This will be addressed immediately after complete removal of the tumor. The defect can usually be repaired with sutures. At times a reconstructive procedure will need to be done utilizing a skin flap or a skin graft. In very rare cases, it may be necessary to refer you for additional treatment by another specialist.

WHAT ARE THE RISKS OF MOHS PROCEDURE:

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 the surgery there will be a scar, but we use reconstructive and plastic surgery techniques to minimize and hide the 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 YOU DID 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 (metastasize) and result in a much larger more extensive procedure and/or a referral to a tertiary care facility.

PREPARING FOR THE MOHS SURGERY:

You should provide us with a complete list of medications (prescription, over the counter, vitamins and supplements) This is especially true regarding blood thinners, including Aspirin. We ask that if you are taking Aspirin that unless directed by a physician you stop it one week prior to your surgery. Ibuprofen and Aleve should also be avoided for 5 days, these also increase the risk of bleeding complications. Tylenol (Acetaminophen) is OK. We advise you to eat a normal breakfast. You may be in our office until or after lunchtime. Wear comfortable clothing; a button up shirt is best. Since you may spend most of the time waiting for the laboratory preparation and examination of your specimens, you may wish to bring a good book and/or laptop, etc.

DURATION OF THE PROCEDURE:

Most Mohs cases can be completed in one or two stages, requiring less than four hours. Some more aggressive tumors may require several stages. However, it is not possible to predict how extensive the skin cancer can be. Therefore, it is advisable to reserve the entire day for this surgical procedure.

Post surgical care will be provided to you upon completion of your Mohs surgery. Included will be your wound care, what to expect and how long your sutures will be in. We welcome any and all questions or concerns that you should have concerning your wound care.

775-883-7811

*** We are affiliated with the AMERICAN SOCIETY FOR MOHS SURGERY (ASMS)**

www.mohssurgery.org

The Mohs Surgical Procedure

Typically, Mohs surgery is performed as an outpatient procedure in the physician's office. Although the patient is awake during the entire procedure, discomfort is usually minimal and no greater than it would be for more routine skin cancer surgeries. The Mohs surgical procedure is illustrated in the following diagrams:

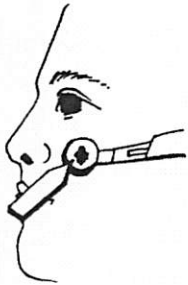


Figure A

The area to be treated is cleansed, marked, and injected with a local anesthetic. The Mohs surgeon removes the visible cancer, along with a thin layer of additional tissue (Stage I). The patient waits while tissue is being processed and examined.

Stage 1

Figure B

The removed tissue specimen is cut into sections, stained, and marked on a detailed diagram (Mohs map).

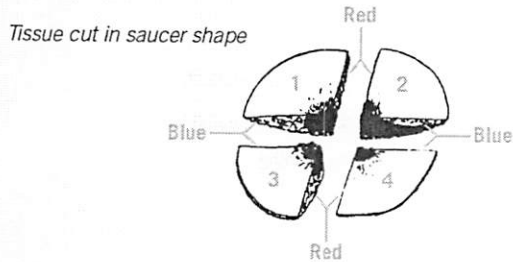
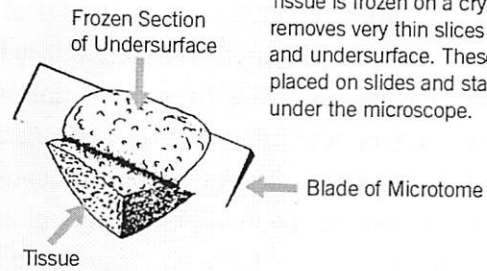
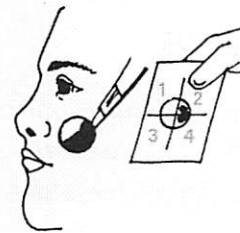


Figure C



Tissue is frozen on a cryostat, and technician removes very thin slices from the entire edge and undersurface. These slices are then placed on slides and stained for examination under the microscope.

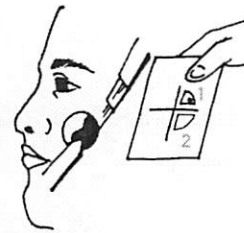
Figure D



The Mohs surgeon carefully examines the entire undersurface and complete edge of the specimen, and all microscopic "roots" of the cancer are precisely identified and pinpointed on the Mohs map. Upon microscopic examination, if residual cancer is found, the Mohs surgeon utilizes the Mohs map to direct the removal of additional tissue (Stage II). Note that additional tissue is removed only where cancer is present.

Stage 2

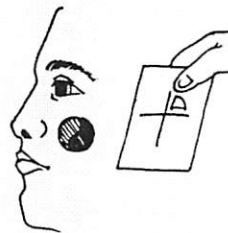
Figure E



This process is repeated as many times as necessary to locate any remaining cancerous areas within the tissue specimen (Stage III, Stage IV, etc.)

Stage 3

Figure F



When microscopic examination reveals that there is no remaining tumor, the surgical defect is ready for repair.

Stage 4