

Mohs Surgery

Edmonton's Cosmetic Surgery Clinic

MOHS MICROGRAPHIC SURGERY

THE HIGHEST CURE RATES FOR COMMON SKIN CANCERS

What is Mohs Surgery?

In the early 1940's, Dr. Frederick Mohs developed a unique form of skin cancer treatment. The addition of "Mohs" honors the doctor who developed the technique. It is a highly specialized form of treatment for the total removal of skin cancers. It is performed by a team of medical personnel that includes physicians, nurses, and technicians.

At the Western Canada Dermatology Institute Surgical Unit, Dr. Mariusz Sapijaszko heads the surgical team. Dr. Sapijaszko completed Mohs Surgery training at the University of California in San Francisco and is the first fellowship-trained Mohs Surgeon in Edmonton. The nurse is an important part of the team who will help answer the questions, respond to patient anxieties, assist in surgery, and instruct in dressings and wound care after the surgery is performed. A technician performs the essential task of preparing the tissue slides, which are examined under a microscope by Dr. Sapijaszko during the procedure.

When is Mohs Surgery Used?

Mohs Surgery is a specialized technique and it is mostly used to treat skin cancers of the head and neck region, skin cancers with poorly defined edges, recurrent cancers as well as the cancers located on sensitive areas where tissue preservation is important.

How is Mohs Surgery performed?

The surgery is performed as follows:

- The skin suspicious for cancer is treated with a local anesthetic so there is no feeling of pain in the area. To remove most of the visible skin cancer, the tumor is scraped using a sharp instrument called a curette.

- A thin piece of tissue is then removed surgically around and under the scraped skin and carefully divided into pieces that will fit on a

microscope slide; the edges are marked with colored dyes; a careful map or diagram is made of the tissue removed; and the tissue is frozen by the technician.

- Thin slides can then be made from the frozen tissue and examined by Dr. Sapijaszko under a microscope.

- Most bleeding is controlled using pressure or electrocautery, although occasionally a small blood vessel is encountered which must be tied using suture material.

- A pressure dressing is then applied and the patient is asked to wait while the slides are being processed.

- Dr. Sapijaszko examines the slides under the microscope and is able to tell if any tumor is still present.

- If cancer cells remain, Dr. Sapijaszko is able to exactly locate them based on his map. Another layer of tissue is then removed from the area identified and the procedure is repeated until Dr. Sapijaszko is satisfied that the entire base and sides of the wound have no cancer cells remaining.

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As well as achieving a high percentage of total removal of the cancer, this process preserves as much normal, healthy, surrounding skin as possible.

The removal of each layer of tissue takes approximately 30 to 60 minutes. Only 10-20 minutes of that is spent in the actual surgical procedure, the remaining time being required for slide preparation and interpretation. It usually takes removal of two or three layers of tissue (called "stages"), to complete the surgery. Therefore, by beginning early in the morning Mohs surgery is generally finished in one day. Sometimes, however, a tumor may be extensive enough to necessitate continuing surgery a second day.

What happens after the cancer is removed?

At the end of Mohs surgery, patients are left with a surgical wound. This wound is dealt with in one of several ways. The several options are discussed with the patient in order to provide the best possible functional and cosmetic results without disguising the small possibility of a recurrence.

The closing/healing possibilities explained below include:

- Healing by spontaneous granulation ("second intention"). Healing by spontaneous granulation involves letting the wound heal by itself. This offers a good chance to observe the wound as it heals after removal of a difficult tumor. Experience has taught us that there are certain areas of the body where nature will heal a wound as nicely as any further surgical procedure. Healing time is 3 - 4 weeks. There are also times when a wound will be left to heal knowing that if the resultant

scar is unacceptable, some form of cosmetic surgery can be performed at a later date.

- Closing the wound, or part of the wound with stitches. Closing the wound with stitches is often performed on a small lesion. This involves some adjustment of the wound and sewing the skin edges together. This procedure speeds healing and can offer a good cosmetic result. For example, the scar can be hidden in a wrinkle line.

- Using a skin flap(s). Skin flap(s) involve movement of adjacent, healthy tissue to cover a surgical site. Where practical, they are chosen because of the excellent cosmetic match of nearby skin

- Using a skin graft. Skin grafts involve covering a surgical site with skin or skin and cartilage from another area of the body. There are three types of skin grafts. The first is called a split-thickness graft. This is a thin shave of skin, usually taken from the thigh, which is used to cover a surgical wound. This can either be permanent coverage or temporary coverage before another cosmetic procedure is done at a later date. The second graft-type is the full-thickness graft. This graft provides a thicker layer of skin to achieve desired results. In this instance, skin is usually removed from behind the ear or around the collarbone (the donor site), and stitched to cover a wound. The donor site is then sutured together to provide a good cosmetic result. A third type of graft uses skin and cartilage. This usually comes from the ear and is used to repair defects of the nose.

- Arranging a consultation with a surgeon who specializes in more complicated surgical repairs. If your Mohs surgery is extensive or is performed where a functional impairment results, we may recommend you visit one of several consultant physicians. If you have been sent to us by a physician skilled in skin closures (for example, a plastic surgeon, ophthalmologist or a head and neck surgeon), he or she will usually take care of you after your cancer has been removed.

In summary, by microscopically pinpointing areas involved with cancer and selectively removing these tissues, the Mohs surgeon can most successfully remove your skin cancer. Because normal tissue is preserved to the greatest extent possible, the Mohs surgeon is able to offer you an increased possibility of a good cosmetic result. Although an attempt will be made to minimize the scar, you will be left with a scar of some kind.

Youthful Image

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How do patients prepare for the day of surgery?

The best preparation for Mohs surgery is a good night's rest followed by breakfast. In most cases, the surgery will be completed on an outpatient basis in our clinic. Because you can expect to be here for most of the day, it is wise to bring a book or magazine to read. Also, because the day may prove to be quite tiring, it is advisable to have someone

accompany you on the day of surgery to provide companionship and to drive you home.

We request that you stop taking any aspirin or aspirin-containing compounds and Ibuprofen (Advil) two weeks before your surgery. This is because they may interfere with the normal blood clotting mechanism, making you bleed more than normal during surgery. If your physician has prescribed these medications, please check with him/her before making any changes. If you have questions about specific medications you are taking, please call our nurses.

What happens the day of surgery?

Mohs surgery appointments are purposely scheduled early in the day. Upon arrival the patients check in at the Western Canada Dermatology Institute Surgical Unit reception desk. When the surgical suite is available, the patients are escorted by the surgical nurse to the treatment area. She goes over the procedure and answers any questions. Dr. Sapijaszko is also available to answer questions.

The patients are placed on the surgical table and the area around your skin cancer is cleansed and anesthetized (numbed) using a local anesthetic. This may be uncomfortable, but usually this is the only pain one feels during the procedure. Once the area is numbed, a layer of tissue is removed and the bleeding controlled. The layer of tissue removed is then carefully handled by Dr. Sapijaszko, diagrammed, and sent to the technician to be processed into microscopic slides. A dressing is placed over your surgical wound and the patients are allowed to rest. On the average, it takes 30 to 60 minutes for the slides to be prepared and studied. During this time the patient can relax or read the book or magazine.

Most Mohs surgery cases are completed in two or three stages. Each stage involves the removal and microscopic examination of your skin for cancer. Therefore, the majority of cases are finished during one day. Once Dr. Sapijaszko is sure that he totally removed the skin cancer, the determination is made as to the best method to deal with the resulting surgical wound.

What can I expect after the surgery is completed?

Dressings

Once the surgery is completed, your wound will be dressed with special dressings. Depending on the size of the wound, its location and the type of repair used, the dressing can be quite substantial. Dr. Sapijaszko or his staff will go over wound care instruction with you and provide you with a written handout. Follow-up appointment will be made to remove the stitches or change dressings.

Pain

Most people are concerned about pain. With our technique, most patients experience remarkably little discomfort during or after the surgery. Following surgery, most patients can benefit from Tylenol or Extra Strength for the first day or so. After that the discomfort is usually minimal. In rare cases, Dr. Sapijaszko can prescribe a stronger pain reliever.

Bleeding

A small number of patients will experience some bleeding post-operatively. This bleeding can usually be controlled by the use of pressure. Patients can take a gauze pad and apply constant pressure over the bleeding point for 15 minutes without lifting up or relieve the pressure at all during that period of time. If bleeding persists after continued pressure for

15 minutes, repeat the pressure for another 15 minutes. If this fails, patients are asked to call our office or visit a local Emergency Room. It is advisable not to drink alcohol the first post-operative night as this may stimulate bleeding.

Complications

There are some minor complications that may occur after Mohs surgery. A small red area may develop surrounding the wound. This is normal and does not necessarily indicate infection. However, if this redness persists or worsens in two days or the wound begins to drain pus, patients should notify Dr. Sapijaszko and/or his team immediately. Itching and redness around the wound, especially in areas where adhesive tape has been applied, are not uncommon. Swelling and bruising are very common following Mohs surgery, particularly when it is performed around the eyes. This usually subsides within 5-7 days after surgery and may be decreased by the use of ice packs in the first 48 hours. At times, the area surrounding the operative site will be numb to the touch. This area of anesthesia (numbness) may persist for several months or longer. In some instances, it may be permanent. If this occurs, please discuss it with Dr. Sapijaszko at the follow-up visit.

Although every effort will be made to offer the best possible cosmetic result, patients are left with a scar. The scar can be minimized by the proper care of the wound. Dr. Sapijaszko and his team discusses wound care in detail with patients and give all patients written Wound Care Information Sheets that explicitly outlines how to take care of whatever type of wound patients have.

Youthful Image