

Slow Mohs Surgery

Introduction

Welcome to Roswell Park. You have been referred to us because Slow Mohs surgery has been shown to be highly effective for your type of skin cancer. This brochure covers:

- skin cancer and Mohs Surgery
- what you can expect during and after surgery
- what you can do to lower your risk of future skin cancer

Please read it carefully. If you have questions, call the Dermatology Clinic at **716-845-3378**, to speak to a nurse.

About Skin Cancer

Skin cancer forms in the tissue of the skin. Cells differ in shape and function in various organs, but all cells reproduce by dividing. The process of normal tissue growth and repair is usually controlled. When uncontrolled, abnormal growth results in masses of tissue called tumors.

Tumors can be benign (not cancer) or malignant. Malignant (cancer) tumors invade and destroy normal tissue as they grow. Cancer cells also can break away from the tumor and spread (metastasize) through the blood or lymphatic vessels to form additional tumors in other locations.

Melanoma is a serious form of skin cancer, and may be life-threatening if not treated early. It originates from melanocytes, the cells that make the pigment called melanin. Melanin gives color to our skin, hair, and eyes. Melanoma usually begins as a brownish-black spot or bump that gets bigger and may bleed. Melanoma can arise in moles that you have had for years.

Causes of Skin Cancer

Sun exposure appears to be the leading cause of skin cancer. Areas of skin that get a lot of sun exposure – the face, neck, and arms – are where many skin cancers are found. Other risk factors for melanoma include:

- atypical (dysplastic) moles
- 50+ ordinary moles
- fair skin and/or freckling
- personal or family history of melanoma/skin cancer
- a weakened immune system
- excessive sun exposure
- tanning bed use
- history of severe/blistering sunburns

Diagnosing Skin Cancer

- Though most skin growths are benign, a doctor should examine any new growth or any sore that doesn't heal.
- When your doctor thinks a skin growth may be cancerous, a biopsy is performed. The entire area or just a sample of the tissue is removed and sent for examination under a microscope. The test will either rule out cancer or confirm the presence of cancer and determine its type.

Treatment

The surface of the skin cancer you see with the naked eye is just the "tip of the iceberg." More tumors cells may remain within the skin since they can form "fingers" or "roots" that grow downward and outward. These skin cancer cells can extend beyond the boundaries of a visible skin cancer. If all the skin cancer cells are not completely removed, it will re-grow and may require a more extensive surgery. If left untreated, melanoma can advance and spread to other parts of the body, where it becomes hard to treat and can be fatal.

Surgical removal offers the best chance for a cure. For melanomas thinner than 0.8 millimeters (mm), wide local excision or Slow Mohs surgery is often the only treatment needed. For melanomas thicker than 0.8 mm, lymph nodes near the tumor may be removed because cancer can spread through the lymphatic system. If the tumor has spread to other parts of the body, other methods such as chemotherapy, biologic therapy, radiation therapy, or a combination of these methods may be used.

About Slow Mohs Surgery

- Slow Mohs surgery is a specialized outpatient procedure to remove skin cancers.
- It is suitable for skin cancers that are in areas where it is important to preserve as much normal, healthy tissue as possible for the best functional and cosmetic result.
- Slow Mohs surgery is indicated for melanoma in situ (melanoma that is only in the top layer of skin/epidermis), for thin/early melanoma on the head and neck, and for other rare skin cancers.
- Slow Mohs surgery is a staged surgical excision. The tumor and some normal tissue around it (margin) is removed, which reduces the chance that cancer cells remain. The width and depth of surrounding skin (margin) to be removed depends on the thickness of the melanoma and how deeply it has invaded the skin. The typical margin is 0.5 cm to 1.0 cm in a circle around the tumor.
- The tissue is processed in the Mohs method to allow the pathologist to examine the margins and allow the surgeon to "trace" the roots.
- Unlike classic Mohs surgery, which is processed in one day, skin cancers like melanoma have to be sent to an off-site lab for processing. The pathology result typically returns about 24 hours later.
- If the margins are positive, another sample of tissue in the affected area will be removed the following day, and the process will be repeated until the margins are clear.

- Once the margins are negative, you will return to the office for reconstructive surgery with the dermatologic surgeon. On occasion, reconstructive surgery will be pre-arranged with a plastic surgeon or an oculoplastic surgeon.
- Using Slow Mohs surgery to treat invasive melanoma and melanoma in situ, the percentage of cure is approximately 98%.

The Team

Slow Mohs surgery requires a team approach:

- A specially-trained dermatologist to perform the surgery
- A nurse practitioner (NP) or physician assistant (PA) to assist at the surgery
- Nurses or medical assistants
- A pathologist to interpret the microscope slides

Preparing for Surgery

Medications

If you need to stop any medications before surgery, we will give you instructions. Otherwise, continue to take all your medications as usual. If you need to take medications during the day, bring them with you.

Additional Instructions

- You must be able to identify your biopsy site.
- Do not plan surgery around an important engagement.
- Do not travel outside the area for at least 1 week after surgery.
- Shower and wash your hair and face on the day of the surgery.
- Since surgery is performed under local anesthesia, you may eat and drink that day.
- Wear comfortable clothing. If surgery is on an area covered by clothing, wear something easy to remove.
- Do not wear jewelry or makeup if surgery is to be performed on the face.
- Make arrangements for someone to drive you on the day of surgery.
- Do not drink alcohol for 24 hours before surgery.
- Smoking can affect healing by diminishing blood supply at your surgical site. If possible, discontinue smoking entirely; otherwise, cut back to less than 1 pack per day.

The Day of Surgery

Shortly after you arrive, you will be taken to a treatment room where the doctor will review the risks and benefits of Slow Mohs surgery with you and ask you to sign an informed consent form.

We will clean the area around the skin cancer and then inject a local anesthetic. The doctor will remove the cancer as well as a margin of tissue around the cancer. Any bleeding will be stopped with an electric machine called cautery. The procedure takes about 15 minutes. A pressure dressing is applied to the area, and you will be sent home with an open wound.

We will call you the next day with the results and instructions.

- If microscopic examination revealed that tissue still contains cancer cells, the procedure is repeated in the areas where cancer cells were found. The goal is to remove all of the skin cancer and preserve the greatest amount of healthy tissue. Skin cancers can grow deeply and develop roots that extend beyond the area you can see. As a result, the size of the surgical incision depends on the extent of the tumor.
- If the margin was free of cancer cells, then reconstruction can proceed.

Reconstruction After Slow Mohs Surgery

Once it has been determined that the skin cancer has been completely removed, your doctor will decide how best to manage your wound.

In some cases, the wound is allowed to heal by itself (granulation). In other cases, the wound is repaired with side-to-side stitches, a skin graft, or a flap. The decision depends on the size and location of the wound.

- In most cases, the reconstruction is performed by the dermatologic surgeon once the margins are determined to be clear. In a few circumstances, the location or size of the excised area may require a complex repair by a plastic surgeon or oculoplastic surgeon. This will be arranged when the surgery date is scheduled.
- If your wound will heal by granulation, you will receive written instructions on changing the bandage. **This must be done every day for 3-6 weeks.**
- While it is impossible to predict how many stages will be required, Slow Mohs surgery usually occurs over 2 days to one week
- Please keep your week free for this procedure since it may require multiple days depending on the results.

After Your Surgery

Pain	Most patients have only slight discomfort for the first couple days. Extra-Strength Tylenol® and ibuprofen are usually adequate for relief. Avoid medicines that contain aspirin because they may cause bleeding.
Bleeding	Occasionally, bleeding occurs after surgery. If this happens, stay calm. Lie down and apply steady, firm pressure over the wound as close as possible to the area that is bleeding. Keep the pressure on for 20 minutes (timed) continuously. Do not lift the bandage to check on the bleeding. If still bleeding after 20 minutes, apply the pressure for another 20 minutes. If still bleeding after 40 minutes, call us.
Exercise	No bending, lifting anything heavier than 15 pounds, or strenuous activity while stitches are in place. Wait 2 weeks before doing aerobic exercise or weightlifting.
Drainage	All wounds drain during the first week or two and frequent dressing changes are needed. If you see foul-smelling fluid coming from the wound, call us immediately. If it is an infection, you may need an antibiotic.
Swelling and Bruising	Swelling and bruising are common, particularly if the surgery site was near the eye. Bruising and swelling peak about 48 hours after the surgery. Usually this is not a problem, and both will decrease as the wound heals.
Infection	Wound infections are unusual. If you see thick, foul smelling fluid coming from the wound, call us. An antibiotic may be necessary.
Redness	All wounds develop a circle of redness around them that disappears gradually. If the area becomes very red and itchy, you may be allergic to the antibiotic ointment or to the tape. If this develops, call us.
Scarring	Most surgeries leave a scar. The scar will become less noticeable over time.
Stitches and Skin Grafts	If your wound is closed with stitches or a skin graft, keep the area clean, dry, and bandaged as directed, until your next clinic visit. Stitches are usually removed 1 week after surgery. In some cases, additional visits may be needed for a few weeks or months.

Important Phone Numbers

- Dermatology Center: Monday – Friday, 8 a.m. to 5 p.m., **call 716-845-3378**, and choose option 4.
- After hours/weekends: Contact Roswell’s main number **716-845-2300**, and our Call Center will assist you.

After the Wound Has Healed

As the wound heals, some tightness and itching are common and it usually lessens with time. Itching is often relieved by applying a small amount of plain petroleum jelly on the scar. Tumors often involve nerves, and it may be two years before normal feeling returns. The area may remain numb permanently. Only time will tell.

Scar tissue that grows over the wound has many more blood vessels than the surrounding skin. The result is a red scar that may be sensitive to temperature changes. This sensitivity improves with time and the redness gradually fades. If the scar is unacceptable to you, you may want to consider surgical scar revision. We advise you to wait 12 months because the appearance of the scar will continue to improve for up to 1 year after surgery.

Follow-up Visits

Follow-up exams by your referring physician are important to help with early detection and treatment of any new skin cancer or the unlikely recurrence of the skin cancer already treated.

As a person who has had a skin cancer, you are at risk of developing others in the years ahead. You should be examined by your physician at least once each year. If you notice suspicious areas on your skin between visits, check with your physician to see if a biopsy is needed.

Defending Against Future Skin Cancer

The most important thing you can do to reduce your risk of future skin cancers is to protect your skin from further sun damage. Apply sunscreen to all exposed skin, including the tops of the ears, 15 minutes before you go outdoors. Wear a broad-brimmed hat and protective clothing, such as a long-sleeved shirt. Do not use tanning beds.

There are a number of excellent sunscreens available without a prescription. Whichever you choose, the sun protection factor (SPF) should be 30 or higher. These colorless creams or lotions absorb or block the damaging rays of the sun that cause sunburn and other skin damage. They may wash off with water or heavy perspiration, so be sure to reapply sunscreen after swimming or exercise. Use a sunscreen labeled as water resistant.

How can I Learn if I am a Candidate for Slow Mohs Surgery?

To schedule a consultation, please call our referral office at **716-845-3516**.