

## MOHS MICROGRAPHIC SURGERY

### **What is Mohs micrographic surgery?**

Mohs micrographic surgery is a specialized technique to treat certain kinds of skin cancer, most commonly basal cell carcinoma and squamous cell carcinoma. Mohs surgery is the only kind of skin cancer surgery that evaluates 100% of the surgical margin or edges, resulting in the highest possible cure rate, typically greater than 99%.

### **What does Mohs stand for?**

Mohs surgery is named for Frederic Mohs, the physician who originally developed this technique in the 1930s. The exact procedure has been refined over the intervening decades.

### **How is Mohs surgery performed?**

Mohs surgery is performed in the outpatient setting. You will be awake throughout the procedure. Local anesthetic is used to numb the surgical area, similar to when your doctor performed the biopsy. The skin cancer is surgically cut out.

While you wait in the office, the tissue is processed in a special way with colored inks so that the Mohs surgeon knows what is up/down and left/right. This allows the Mohs surgeon to evaluate 100% of the surgical margin underneath the microscope. Mohs surgery is the only form of skin cancer removal that evaluates 100% of the margin. If there is skin cancer at the margin, the colored inks allow the surgeon to precisely map out where the residual cancer is located.

Using the map, the Mohs surgeon will then go back to just the area of remaining tumor and remove additional tissue. This process is repeated until the skin cancer is fully removed. Mohs surgery is also the only form of skin cancer removal in which your surgeon is the pathologist, so the surgeon knows exactly what the tumor looks like, how aggressive it is and where it is located. This process allows for complete removal of the skin cancer while preserving as much of the surrounding normal skin as possible.

Once the tumor is removed, the surgeon will discuss with you the best way to repair the area to ensure that you heal well with a minimal scar. In most cases, stitches will be needed. Sometimes the area can be allowed to heal in like a bad scrape.

### **How long does the procedure take?**

The typical surgery appointment is scheduled in the morning and can last 3-8 hours. The amount of time depends on how many times your surgeon needs to remove a layer of tissue and on the complexity of the surgical repair. It is sometimes difficult to predict in advance. For many patients, the tumor will be fully removed after 1 or 2 layers, but for some tumors, the surgeon will have to remove 3 or more layers of tissue to fully remove the skin cancer. While each layer is being processed, a temporary bandage will cover your wound and you will be able to wait in the waiting room, read, eat and use the bathroom.

### **Who performs Mohs surgery?**

Mohs surgery is performed by a board-certified dermatologist. We always recommend that you see a Mohs surgeon who is fellowship-trained and a member of the American College of Mohs Surgery. This means that your surgeon has undergone an additional year of specialized training in the Mohs surgery technique and advanced reconstruction and repair techniques.

### **I think the biopsy removed the skin cancer. Do I really need Mohs surgery?**

Yes. When the biopsy was performed, your dermatologist was just taking a small sample of the lesion to give you a diagnosis. The biopsy was not intended to fully remove the skin cancer. Skin cancers can have roots that are not visible with just your naked eye. With Mohs surgery, your surgeon will evaluate the removed skin under the microscope, to ensure complete removal of these microscopic roots of cancer.

### **Will I have a scar after Mohs surgery?**

Yes. Any time there is a cut to the skin it will heal with a scar. It is not possible to cut the skin and not leave a scar. However, your fellowship-trained Mohs surgeon is trained in advanced reconstruction and repair techniques to hide and minimize the scar as much as possible. Additionally, Mohs surgery removes the skin cancer while leaving as much of the normal surrounding skin as possible, thus making the scar as small as possible.

## PRE-OPERATIVE INSTRUCTIONS

In planning for skin surgery in our office, we kindly ask you to refer to the following instructions. Please call if you have any questions or concerns.

- 1) Continue taking ALL prescribed medications, including all blood thinners.**
- 2) Please bring an updated medication list with you to your surgery appointment. This list should include prescribed medications, over-the-counter medications, vitamins and supplements.
- 3) If on oxygen, please bring enough for the entire day.
- 4) Stop smoking. Smoking decreases wound healing.
- 5) Avoid alcohol the night before your surgery appointment.
- 6) If you have had a mechanical heart valve or an artificial joint placed within the last 2 years, you will need to take the pre-surgical antibiotic we have prescribed one hour prior to your surgery.
- 7) If your surgery is being performed on the scalp, please avoid hair products (hairspray, mousse, gel, etc.) on the day of surgery. If your surgery is being performed on the face, we will need to remove any makeup in the area prior to surgery. We recommend that you leave earrings and necklaces at home on the day of surgery.
- 8) Do not trim or shave hair around the surgical site. This can lead to small microscopic cuts in the skin and increase your risk of developing an infection after surgery.
- 9) Please eat breakfast and be well hydrated prior to surgery.**
- 10) Bring a sweater and reading material/entertainment to your appointment.
- 11) If your surgery is near your eyes, please bring a driver.
- 12) Please be advised that physical activity (heavy lifting or heavy exercising) should be avoided or limited for 1-2 weeks after surgery to ensure proper healing.

Thank you for your cooperation.

## WOUND CARE INSTRUCTIONS

### WHAT TO EXPECT AND DO AFTER SURGERY:

- **Pain** should be minimal and easily treated with acetaminophen (Tylenol) and ibuprofen (Motrin, Advil). You may take Tylenol 1000 mg (1 gram) by mouth and ibuprofen 400 mg by mouth every 4-6 hours as needed for pain, with a **MAXIMUM** of 4 doses every 24 hours. Taking more than 4 doses of Tylenol in a 24-hour period can be dangerous and lead to liver damage.
- If you are experiencing **severe pain** that is not managed by the above instructions, please contact the clinic immediately.
- **Exercise** or activity that raises your blood pressure or pulse should be avoided for at least 1-2 days. If you have sutures in place, it is best to avoid strenuous exercise or activity until the sutures are removed.
- **Redness** of the skin about 1/4 of an inch around the site is normal.
- **Green discharge (pus) or increasing size of redness** might be a sign of infection. The area should be only slightly warm to touch. If the area **feels hot**, especially if increasingly hot and painful, please contact the clinic immediately as these can be signs of an infection.
- If the area **bleeds** (a constant trickle of blood), hold firm pressure with a clean gauze or towel over the area for 20 minutes. **WATCH THE CLOCK WHILE APPLYING CONSTANT PRESSURE – NO PEEKING during the 20 minutes.** The pressure should be equivalent to a very firm handshake. After 20 minutes, gently and slowly stop applying pressure but don't disturb the area. If the bleeding continues or if you have any problems or questions please call the clinic.

### DAILY WOUND CARE:

Remove the bulky bandage that you had placed in the office after 24-48 hours and follow these instructions on a daily basis:

1. Each day, gently remove the nonstick bandage.
2. Lightly cleanse the skin with warm soapy water. It is ok to clean the area in the shower but be very gentle – do not allow the shower to directly hit the area. The goal is to gently remove any ointment and crust that has come from the wound. If there is crust or ointment that does not come off, just leave it in place – do not try to pick it off.
3. When finished, pat the area dry with a clean towel.
4. Apply a layer of **Vaseline petroleum jelly only**, followed by a nonstick bandage (such as Telfa). Hold this in place with tape (Hypafix). Keeping a layer of Vaseline on the area is very important for good wound healing. Do not allow the area to dry out or scab – this will slow healing.

### SUTURE (STITCH) REMOVAL:

Sutures (stitches) on the head and neck area are generally removed in 7-10 days. Sutures on the rest of the body are generally removed in 14 or 21 days. You will need to make an appointment for this if you have not already made one.

### SCAR:

If you have any questions or concerns about how the area has healed, please schedule a follow-up appointment. Everyone heals differently and some sites of the body heal better than others. If the scar becomes firm or raised, we can sometimes minimize this with a small injection. Redness is normal and may take 6 months to fade.

**Please call if you have any questions or concerns that are not answered here.**

**WOUND CARE INSTRUCTIONS: PRIMATRIX**

**WHAT TO EXPECT AND DO AFTER SURGERY:**

- **Pain** should be minimal and easily treated with acetaminophen (Tylenol) and ibuprofen (Motrin, Advil). You may take Tylenol 1000 mg (1 gram) by mouth and ibuprofen 400 mg by mouth every 4-6 hours as needed for pain, with a **MAXIMUM** of 4 doses every 24 hours. Taking more than 4 doses of Tylenol in a 24-hour period can be dangerous and lead to liver damage.
- If you are experiencing **severe pain** that is not managed by the above instructions, please contact the clinic immediately.
- **Exercise** or activity that raises your blood pressure or pulse should be avoided for at least 1-2 days.
- **Redness** of the skin about 1/4 of an inch around the site is normal.
- **Green discharge (pus) or increasing size of redness** might be a sign of infection. The area should be only slightly warm to touch. If the area **feels hot**, especially if increasingly hot and painful, please contact the clinic immediately as these can be signs of an infection.
- If the area **bleeds** (a constant trickle of blood), hold firm pressure with a clean gauze or towel over the area for 20 minutes. **WATCH THE CLOCK WHILE APPLYING CONSTANT PRESSURE – NO PEEKING during the 20 minutes.** The pressure should be equivalent to a very firm handshake. After 20 minutes, gently and slowly stop applying pressure but don't disturb the area. If the bleeding continues or if you have any problems or questions please call the clinic.

**DAILY WOUND CARE:**

Remove the bulky bandage that you had placed in the office after 24 hours and follow these instructions on a daily or twice daily basis:

1. Leave the dressing on while showering to protect the area.
2. At least once a day (twice a day if you are able), gently remove the bandage.
3. Soak clean gauze with normal saline (sodium chloride). Apply the wet saline-soaked gauze to the area and soak for 15-30 minutes. **The Primatrix should be white or pink or red.** If it starts to turn brown or black this means it is drying out. Soak for 30-60 minutes if this starts to happen. If the Primatrix dries out, the area cannot heal. **Please call us if you are concerned about the appearance of the Primatrix.**
4. When finished soaking, apply a layer of **Vaseline petroleum jelly**, followed by a layer of **Adaptic dressing**, followed by more Vaseline. Over this, apply a nonstick bandage (such as Telfa). Hold this in place with tape (Hypafix).

**FOLLOW-UP:**

In general, a follow-up appointment will be scheduled for 3-6 weeks. Continue the daily to twice daily soaks and wound care as described above until your follow-up appointment. If you are concerned about the appearance of the Primatrix or the Primatrix becomes loose, please notify the clinic so that we can evaluate the area.

**Please call if you have any questions or concerns that are not answered here.**