

# **Mohs Micrographic Surgery**

---

## **Patient Handbook**

Baylor  
Medicine

**Department of Dermatology**

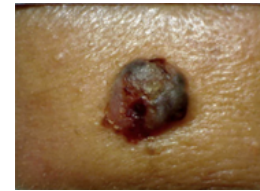
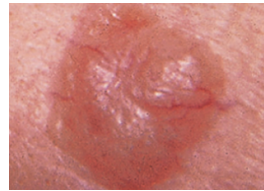
# Table of Contents

About Skin Cancer	3
Causes of Skin Cancer	4
Skin Cancer Treatment	4
Mohs Surgery	5
Steps in Mohs Surgery	6
Preparing for Surgery	8
Surgery Check List	9
Day of Surgery Information	10
Surgery Day Details	12
Discharge from the Clinic	12
Risks and Complications Following Surgery	13
Post-Operative Wound Care Instructions	15
Post-Operative Instructions and Limitations of Activity	18
Follow-Up Care	18
Future Sun Exposure	19
Frequently Asked Questions	20
Patient Notes	22
Citations	23

# About Skin Cancer

According to the American Academy of Dermatology (AAD), there are 3 to 5 million cases of non-melanoma skin cancers each year. Skin cancer is common. Roughly 9,500 people are diagnosed with skin cancer daily in the United States. It is important to know that not all skin cancers are the same. The most common types of skin cancer are: Basal cell carcinoma (BCC), Squamous cell carcinoma (SCC), and Melanoma.

**Basal cell carcinoma:** These range in appearance but are generally slow-growing tumors that start off looking like a “pimple” that doesn’t quite heal (over months or longer). The tumor may bleed easily or may have no symptoms at all.



1a

**Squamous cell carcinoma:** These often start as a rough, dry patch of skin or a rough growth that does not get better with moisturizers. These can be tender to touch or grow more quickly. This type of skin cancer may very rarely spread to other parts of the body if neglected or left untreated, or if the tumor has aggressive features. If neglected, an aggressive squamous cell skin cancer can invade deeper to destroy nerves and muscles, and it can spread to lymph nodes or other areas of the body.



1b

**Melanoma:** Melanomas are less common but more serious. Early detection and treatment of this cancer is critical. The evaluation, diagnosis, and management of this type of skin cancer can be more complex.



1c

# Causes of Skin Cancer

The cause of skin cancer, like other forms of cancer, is not completely known. Exposure to sunlight is the single most **important** factor associated with the development of skin cancers. Skin cells are damaged by sunlight and other types of ultraviolet light. Light-skinned individuals often develop skin cancer more frequently than dark-skinned individuals who have pigments in their skin that protect them from the sun. Cancers of the skin are more common in the southern United States where there is more intense sunlight.



Melanoma has a hereditary component with higher risks for people who have a sibling, parent, or child with a history of skin cancer. Our immune system also plays a role by destroying abnormal cells before they become cancer. Other possible causes of skin cancer include radiation, chronic wounds and blistering diseases, and certain chemical exposures. There are ongoing studies to analyze these and other possible causes.



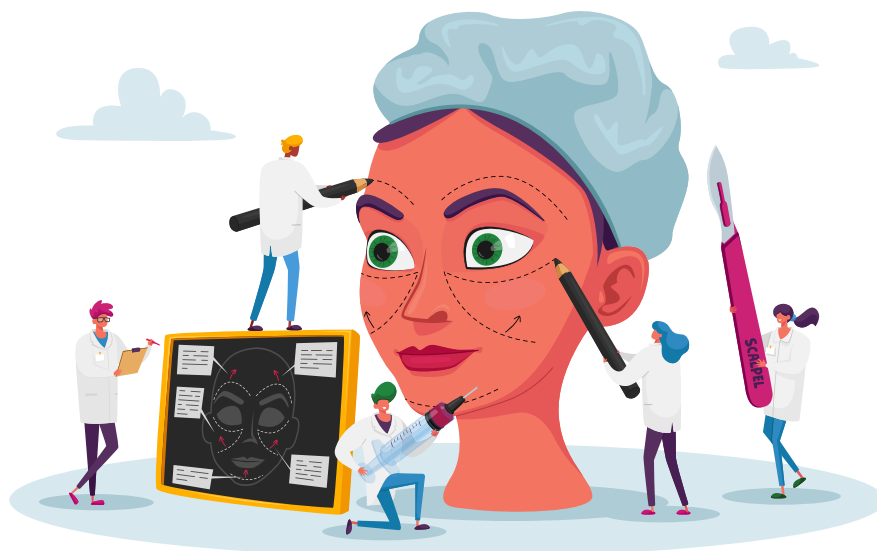
# Skin Cancer Treatment

There are several methods of treating skin cancer, all of which are highly successful in the majority of patients. Aside from Mohs surgery, other methods include excision (non-Mohs surgical removal), curettage and electrodesiccation (scraping with a curette then burning with an electric needle), radiation, cryosurgery (freezing) and injectable chemotherapy. Laser and topical treatments are not generally recommended as a skin cancer treatment except for certain forms of superficial cancer and pre-cancerous growths. Which treatment we recommend depends on several factors, such as the location of the cancer, its size, its depth, its growth pattern, and previous therapies. This handbook focuses primarily on Mohs surgery. Please feel free to discuss the risks and benefits of various treatment options with your dermatologist or Mohs surgeon.

# Mohs Surgery

In Mohs micrographic surgery, tissue is removed and examined under the microscope, to determine how much of the tumor has been eliminated. Developed in the 1930's by Dr. Frederic E. Mohs, Mohs surgery is a technique to remove skin cancer that results in an excellent chance of cure. Mohs micrographic surgery is a specialized type of surgery developed for the precise and complete removal of skin cancers. It has the following unique hallmarks:

- The entire removed surgical tissue (margin) is examined under the microscope.
- The Mohs surgeon who removes your cancer also reviews the removed surgical tissue under the microscope and determines if cancer is still present.
- If cancer is present in the margin, the Mohs surgeon knows exactly where the cancer is and removes more tissue precisely at that targeted location.



# Steps in Mohs Surgery

**There are multiple steps in Mohs surgery:**

**1. Anesthesia:** Mohs surgery is performed with the administration of local anesthesia (an injection of numbing medication) into the skin. There may be slight sensation with the injection but otherwise you should feel no pain.

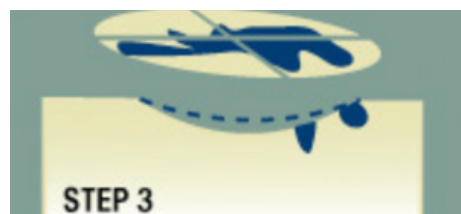
**2. Cleaning/sterilizing of the area:** This will be performed with a surgical cleanser to minimize the risk of infection.



**3. Debulking:** The visible portion of the tumor may first be removed with a scalpel (surgical knife) or a curette (a tool that scrapes).



**4. Removing stage 1:** A thin layer of tissue will then be removed with a scalpel and processed for microscopic examination by the surgeon. Surgical markers are placed on the patient and on the tissue to ensure that orientation of the tissue (right side vs. left side, upper vs. lower) is maintained throughout processing, microscopic examination, and subsequent surgical stages if needed. The surgical wound may be cauterized to stop bleeding and bandaged while the patient waits for results. A color-coded paper or digital map is made that shows where the cancer was removed. Colored dyes are placed on the tissue to match the map.



**5. Laboratory processing of tissue:** Our histology technicians freeze the tissue to harden the tissue, cut thin slices of the tissue, and place them on glass slides and stain them so that the cancer cells are highlighted. This process may take between 30 minutes and two hours depending on the size of the tumor.



2

**6. Microscopic examination of tissue:** The Mohs surgeon then examines the perimeter and undersurface of the removed tissue under the microscope. In about 70 percent of patients, the margins are free of cancer. After the 1st stage, in around 30 percent of patients, cancer is still found at the margins. These patients will need additional stage.

**7. Additional stages:** If cancer is still found at the margins, it is marked on the diagram at the location where it is present. The patient is then brought back into the procedure room, another anesthetic injection is given, and another thin layer of tissue is removed from the cancerous location. Steps 5 and 6 are then repeated. A high percentage of patients have clear margins after a second stage of Mohs surgery. However, there are some unusual tumors that are larger than they look on the surface and require several stages of Mohs surgery.



2

# Preparing for Surgery

**Tobacco:** Do not use tobacco products for at least three weeks before and after surgery. Smoking interferes with skin healing, can lead to surgical complications, and ultimately may affect the appearance of your scar. It is also important to avoid other types of smoking such as vaping and cannabis.



**Time off:** You will not know before your surgery how large of a wound you will have, but you may want to talk to your employer about the possibility of temporary changes in your schedule or duties immediately after surgery. The larger your wound, the more healing time you will need, and this may impact your return to daily activities and return to work. For most desk jobs, you can usually return to work 1-2 days after surgery. For other jobs, especially those requiring heavy lifting or physical labor, you may wish to consider additional time off work.

We strongly recommend that you have someone drive you to and from the clinic since swelling from surgery can sometimes affect your vision. It is also a good idea to bring a book or magazines and snacks with you for the times during the day that you will be waiting.

**If you are not ambulatory,** please contact surgical staff before the surgery. BCM Dermatology staff cannot make patient transfers from the wheelchair or transport gurney to the surgical bed. Specific arrangements will need to be made prior to the surgery for this process.

**If you do not make your own medical decisions,** bring your designated decision maker with you to the appointment. If either a guardian or health care agent has been appointed, please bring the fully executed document to your appointment. The person making decisions on your behalf must remain with you during the entire medical procedure.

**If you are on Warfarin/Coumadin,** please get your INR checked, if possible, 24-72 hours prior to surgery and fax the results to the surgery clinic at (713) 798-3252.

**If you are getting any post-surgery repairs outside of our Mohs surgical department,** please be sure to follow your other doctor's pre-operation instructions.

If you have any questions prior to your scheduled Mohs surgery, please contact the office at (713) 798-6131.



# Surgery Check List

- ☐ Plan on staying all day. Mohs surgery can take anywhere from 2 hours to a full day depending on the complexity of your case. The average is 4 hours. Arrive at least 30 minutes before your surgery time.
- ☐ Bring your designated decision maker if you do not make your own decisions (example: advanced dementia, guardianship, or health care agent). They will be required for the consent process. **If either a guardian or health care agent has been appointed, please bring the fully executed document to your appointment.**
- ☐ Coordinate help for transfers if needed.
- ☐ Eat a good breakfast and pack snacks for the day of surgery.
- ☐ Bring all of your medications with you to your appointment. Take your necessary regular medications such as blood thinners and blood pressure medications as directed.
- ☐ Bring a companion/driver. Only one person is allowed to accompany each patient due to space constraints in the surgical unit.
- ☐ Bring this booklet if you have questions about any of the information.
- ☐ Wear comfortable easy to remove clothing that you do not mind getting soiled. Bring a jacket/sweater in case the surgical suite is cold.
- ☐ Wash your hair/face and surgical area and do not put on any lotions or make-up before your surgery.
- ☐ Bring something to do while you wait (i.e., book, crosswords, music, etc).
- ☐ Wear your hearing aids.
- ☐ If you are on home oxygen, please bring enough oxygen to last at least 8 hours and your external battery charger.
- ☐ **If you have a pacemaker, defibrillator, or any metal implants**, please inform the nurse/doctor upon arrival for your scheduled surgery.

# Day of Surgery Information



Be prepared for significant waiting time during surgery when your surgeon is in the nearby laboratory examining the tissue (cells from your skin) under the microscope. You will be expected to stay in the immediate surgical area/waiting room for both availability & safety reasons.

Bring something to do. The process of Mohs micrographic surgery can last most of the day or all day. Rarely, it may be recommended to continue surgery on a separate day if your tumor is extensive. You are likely to be physically and emotionally tired. A companion may help you with needs throughout the day (get you snacks, food, drive you home), and can also help listen along with you regarding after care instructions. The bandaging on your face may sometimes be bulky and interfere with vision, so we require that if you do not have a companion, you have someone available to drive you home after your appointment.

If you have a diagnosis of anxiety and regularly take a prescription for this, please bring your medication and plan to take your medication after you sign your consent form.

## Surgery Location

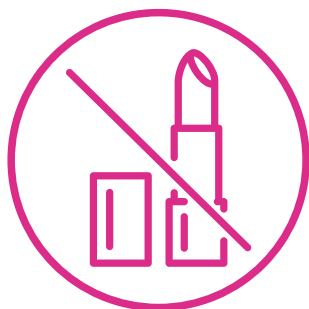
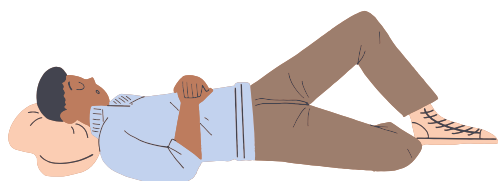
Baylor College of Medicine,  
(6th Floor - Department of Dermatology)  
Jamail Specialty Care Center, McNair Campus,  
Houston, TX 77030  
1977 Butler Blvd., E6.200

## The night before your surgery:

- Bathe. You may be asked to not get your incision wet for 24 to 48 hours after surgery.
- Get a good night's sleep.

## The morning of your surgery:

- Wash the area where you will have surgery thoroughly.
- Do not apply any lotion, make-up, lipstick, hair products, nail polish, or other cosmetic products on the day of your surgery.
- Please leave the identified site for Mohs surgery and surrounding area free of cosmetics, lotions, and all other beauty products.
- Wear comfortable loose clothing that does not have to be pulled over your head to remove (such as a button-down shirt).
- Wear clothing that you don't mind getting soiled.
- Depending on what clothing you wear to your appointment, or what part of your body that will have surgery, you may be asked to get into a surgical gown instead.
- Make sure to eat your normal meal(s) on the day of surgery, especially prior to the appointment. You do not need to fast for this procedure.
- Pack some items to help pass time during your wait, along with snacks and/or lunch.
- Bring your medications that you would normally need to take during the day.

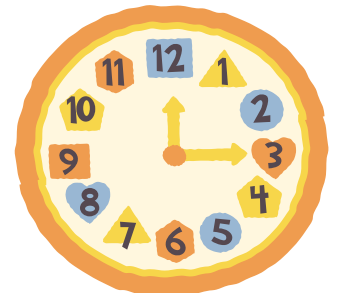


# Surgery Day Details

Mohs surgery is an outpatient surgery. This means you do not have to stay overnight in the hospital. The time it takes to complete your surgery varies from person to person. It may take 2 to 8 (or more) hours depending on the type of tumor, size, number of sites treated, and the method of reconstruction. Most surgeries are finished in approximately 4 hours. You can expect that you will spend most of your time waiting for results to come back from the lab. Mohs surgery is performed under local anesthesia for your safety.

**Do not make any plans for the same day as your surgery** (i.e. dinner reservations, travel, physical activities).

**Do not make other doctors' appointments** for the day of your surgery unless coordinated by our own office.



## Discharge from the Clinic

You will receive instructions verbally and in your written "after visit summary" about how to care for your wounds. Your driver/companion should drive you home unless you have already discussed driving yourself home with your physician. Most wounds on the forehead, temples, upper cheeks, eyelids, and the high nose can lead to eyelid swelling and "black eyes" that can make driving yourself home difficult and unsafe. If you do drive yourself to your surgery, please make sure you have a companion on standby who can pick you up if needed. Plan to rest for the remainder of the day after your surgery.

# Risks and Complications Following Surgery

- **Mild pain:** This is almost always managed with over the counter medication like acetaminophen (such as Tylenol). When needed, this is combined with ibuprofen (such as Advil). Most patients do not require pain medication after the first 48 hours. Please tell your Mohs surgeon if you cannot take acetaminophen or ibuprofen (due to certain medical conditions), so that a plan for pain control can be made.
- **Bleeding:** If you see any bleeding, apply very firm pressure to your bandage/wound for about 15 to 20 minutes (without peeking to check if it has stopped). If after you have tried this two to three times, and the wound continues to bleed, please call us.
- **Infection:** This is uncommon but would require antibiotics. If you think the site is infected, please call us immediately.
- **Loss of nerve or muscle function:** This is a rare complication and may be temporary or permanent. It is common, however, to have a change in sensation or decreased sensation at your surgical site after surgery.
- **Healing:** In some cases the surgery wound may heal more slowly.
- **Swelling and bruising:** This is to be expected and can occur on any part of your body, but especially on your face. If surgery has been performed on or near the eye area (cheek, eyebrow, top of nose, temples, forehead), you may have temporary dramatic eyelid swelling or "black eyes." This will get better with time. Surgery of the lip also tends to lead to dramatic swelling. This usually improves in one to two weeks for most patients.



- **Recurrence:** Mohs micrographic surgery provides the highest cure rate available for most skin cancers. A recurrence (cancer coming back) is possible, so scheduling your regular skin examinations with your dermatologist or other provider is important.

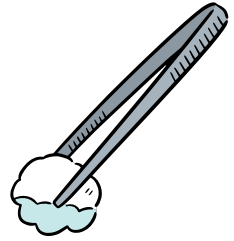


- **Scarring:** You can expect to have a scar after Mohs surgery. While there is no such thing as scar-less surgery, we use special techniques and sutures to ensure the best appearance possible. We make every effort to hide your scar into the natural lines of your skin. Scars are initially red, swollen, and “rubbery” to touch for the first few weeks, even after stitches are removed, because the body is trying to heal. Usually after 1 month, the scar is much less noticeable. By 6 months, the scar is usually very subtle. Scars continue to heal and fade for up to 2 years. Smoking will affect your scar! We do not recommend special scar creams, essential oils, or antibiotic ointments for your wounds as these will not impact the appearance of your scar and could impact healing. Please follow the wound care instructions we provide to you. Lasers can be used after Mohs surgery to reduce redness and enhance skin texture. For best results, it is recommended to perform laser treatment shortly after surgery. Please note that this is a cosmetic procedure; therefore, it is not covered by insurance. If you would like more information, please contact our office.
- **Asymmetry:** When large wounds are stitched side to side, it may tighten the skin in that area. If the surgical site is on one side of your body (such as the left side of face), you may notice slight asymmetry between the sides of your face. However, most people do have natural mild asymmetry of their face and this will not be very noticeable when your scar fully heals.

# Post-Operative Wound Care Instructions

## Supplies:

- Soap and Water
- Telfa (non-stick pad), Gauze, Tape, or Band-Aids
- Q-tips
- Ointment such as Vaseline, Aquaphor, or Bactroban (prescription)



## Daily Wound Care:

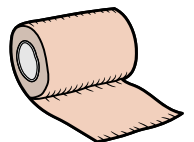
- Keep the initial bandage on and completely dry for 48 hours. If you must take a shower, please avoid getting the bandage wet.
- You may remove the bandage after 48 hours. To aid in the removal of the bandage, you may wet the bandage and then gently remove it.
- Once the bandage is removed, you may see thin clear strips over the sutures called Steri Strips. **DO NOT REMOVE.** The Steri Strips (if present) will fall off on their own. If they fall off with the bandage or while you are washing the area that is fine, you do not need to replace them. If you come back to get the sutures removed and the Steri Strips are still in place, we will remove them for you.
- Once you remove the bandage after 48 hours, you will wash the area.
  - Make sure to wash your hands before and after.
  - Wash the area with plain soap and water. If the wound is on the leg, make sure that it is the last thing you wash before getting out of the shower.
  - Pat the area dry and apply a thin coat of ointment right on the top of the Steri Strips. If the Steri Strips have fallen off or are not present, then you can apply the ointment directly on top of the skin.
  - Cover the wound with Telfa and tape or with a Band-Aid.
  - Do the above daily until healed or instructed otherwise by your Mohs surgeon.

## **Pain Management:**

- Pain levels usually peak within the first 24-48 hours and then gradually improve. We recommend starting with Tylenol Extra Strength 1-2 tablets every 4-6 hours as needed for pain. If the pain is not controlled by Extra Strength Tylenol then you may try adding Aleve or Advil to control the pain. Make sure to follow the dosing instructions on the medication bottles. Do not take more than recommended on the medication label.
- Please apply an ice pack on the area for 5-10 min every hour for the first 12 hours. This also helps with bruising, swelling, and bleeding.
- If the pain is not relieved with Tylenol, Advil, or ice after 3-4 days, or if you have pain and cannot take Tylenol or Advil due to certain medical conditions, please call us at (713) 798-6131.

## **Bleeding:**

- If bleeding does occur, please do the following:
- Lie down and apply firm pressure to the surgical site for 15-20 minutes without looking at the wound.
- If a bulky dressing has been placed over the wound, this should be removed. Leave the pad next to the wound in place
- Then apply direct pressure for 15-20 minutes. Do not lift the pad to check if bleeding has stopped until a total of 20 minutes has passed.
- Then, if the bleeding continues, remove the pad and press directly with a clean gauze pad over the bleeding site for another full 15-20 minutes. Also at the same time, apply an ice pack around the wound.
- If bleeding still persists, please call our office at (713) 798-6131.



## **Activity:**

**No physical activity for 2 weeks after surgery** (i.e. running, exercising, cleaning, yard work, walking the dogs, heavy lifting)



**Swelling and Redness:** It is completely normal to have some swelling and redness around the wound site. This will gradually disappear within a few days up to a week. If the drainage becomes cloudy in appearance or foul smelling or if you experience increased redness or tenderness at the surgery site, please contact our office as soon as possible at (713) 798-6131.

**Head Wounds:** Please avoid bending over or straining. Keep the head elevated at night by sleeping on 2 pillows. Any surgery on the nose or around the eyes might result in bruising. This is normal. Keeping the head elevated and applying ice will help minimize the bruising.

**Arm or Leg Wounds:** Please keep extremities elevated as much as possible. Keeping the extremities elevated will help with swelling or possible infection.

**Contact the doctor immediately if you experience any of the following:**

- Excessive bleeding not controlled by pressure as described in detail above
- Signs of infection, such as
  - Fever
  - Redness with tenderness
  - Foul odor
  - Hot to the touch at surgical site



**During working hours**, please call your Mohs surgeon's office at (713) 798-6131.

**After hours or on the weekend**, please call (713) 798-6131. There is always a doctor on call to consult with you about your concerns.

MyChart: You may also send a MyChart message to your doctor for less urgent concerns. **Do not send messages about urgent matters through MyChart** because it may take two or three business days for a response.

## Post-Operative Limitations of Activity

After Mohs surgery and/or reconstruction, you may be asked to return in one to two weeks for removal of stitches. You may need to limit activity for approximately two or three weeks depending upon surgery. You may want to avoid attendance at big events (weddings, anniversaries, etc.) for one month after surgery if the cancer was on your face. We will ask you to avoid travel, exercise and swimming for up to three weeks depending upon the location of your wound and the type of reconstruction required. When making your appointment, please tell our staff if you anticipate having to travel soon after surgery.



## Follow-Up Care

Your follow-up appointment will be made by the surgery tech. Follow-up care is at the same location as the surgery.

**Location:** Jamail Specialty Care Center

1977 Butler Boulevard, Suite E6.200, Houston, TX 77030.

**Phone:** (713) 798-6131

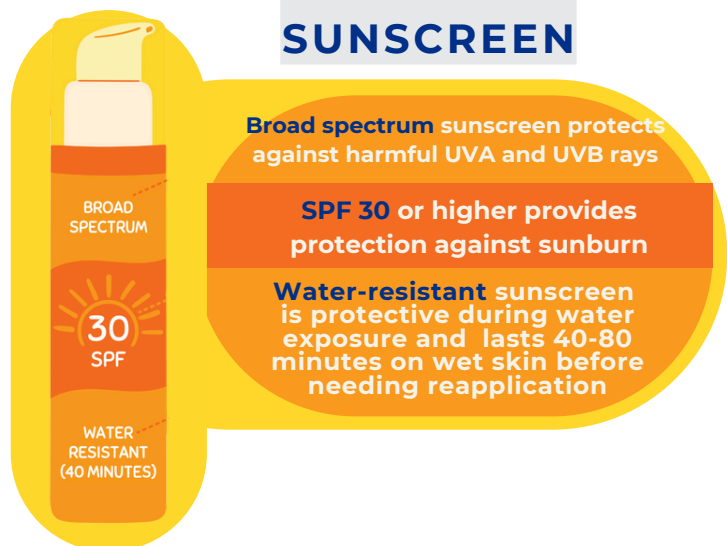
Studies have shown that once you develop a skin cancer, there is a higher risk you will develop more in the years ahead. We recommend that you be seen every six months by your dermatologist so they may determine whether you have developed any new skin cancers. Also, should you notice any areas on your skin that are changing color, any pimples or dry areas that do not resolve in six weeks, please check with your dermatologist to see if a biopsy is needed.

# Future Sun Exposure

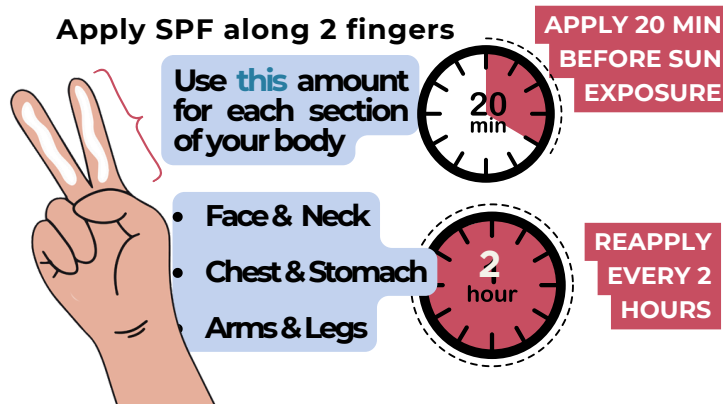
Studies have shown that daily application of sunscreen decreases the number of future skin cancers that skin cancer patients get. Therefore, we recommend using a sunscreen that says “broad-spectrum” with an SPF of at least 30. Look for a sunscreen containing zinc or titanium. You should apply an SPF 30 UVA/UVB blocking sunscreen to any skin not covered by clothing every single day. If the weather is hot, you should use a waterproof sunscreen. If you are spending extended time outdoors, reapply your sunscreen every two hours. Your goal should be to maintain your natural skin color all year round. You should never allow yourself to get sunburned or tanned. Never use tanning beds. However, you should continue to enjoy the outdoors with sunscreen, beach umbrellas, hats, sunglasses, long sleeves, and pants. Try to participate in outdoor activities (including beach, pool, and sports) before 10 AM and after 4 PM, when the sun intensity is less.



## CHOOSE THE CORRECT SUNSCREEN



## PROPER SUNSCREEN APPLICATION



# Frequently Asked Questions

## **Q: Will Mohs surgery leave a scar?**

A: Yes. Scars are how the skin heals following injury or surgery. Because Mohs surgery allows for the smallest possible excision, cosmetic results are typically very good.

## **Q: How many times do you need to remove skin to get all the cancer out?**

A: Most people will need 1 to 3 layers of Mohs surgery removals, called stages, to remove all the skin cancer. There is no way to know how many stages will be needed to get all the cancer out until the surgery.

## **Q: How long does Mohs surgery take?**

A: Most Mohs surgeries will take an average of 2-4 hours. However, there is no way to know how long the surgery will take and how many stages you will need until the surgeon starts. It is best to plan to be at the surgeon's office most of the day, up to 8 hours, if needed.

## **Q: Can I exercise after surgery?**

A: In most cases, strenuous exercise and swimming must be avoided for at least two weeks, sometimes longer, after your surgery.

**Q: Will I have pain after the surgery?**

A: Most patients have only mild discomfort as the anesthesia wears off. Tylenol (and sometimes Advil) are usually all that is needed for relief.

**Q: How many stitches will I have?**

A: If it is necessary to suture your wound after the skin cancer is removed, your Mohs surgeon will use delicate reconstructive techniques to minimize the scar. There may be one long or many tiny stitches.

**Q: What are my chances of a cure?**

A: Mohs Micrographic surgery offers the highest cure rate for most type of skin cancers, even when other forms of treatment have failed. For most skin cancers, the percentage of cure is approximately 97% to 99%.

**Q: Will I have other skin cancers?**

A: The cure rate following Mohs surgery is very high and the tumor is unlikely to recur. If you have developed skin cancer once, however, you are at an increased risk of developing new, unrelated skin cancers in the future. It is important to schedule regular skin checks with your dermatologist. It is also important that you protect your skin from the sun by using sunscreen, wearing hats, and protective clothing. As well, it is important to check your own skin regularly for any new or changing spots or any spots that bleed and/or do not heal.

[illegible]

# Citations

## **1. Image of Squamous Cell Carcinoma (Page 3):**

Skin Cancer Types: Squamous Cell Carcinoma Symptoms (n.d.). American Academy of Dermatology Association.  
<https://www.aad.org/public/diseases/skin-cancer/types/common/scc/symptoms>

## **2. Images of Steps in Mohs Surgery (Pages 6-7):**

The Mohs Step-by-Step Process. (n.d.). American College of Mohs Surgery.  
<https://www.mohscollege.org/for-patients/about-mohs-surgery/the-mohs-step-by-step-process>

**Last updated on 3/10/2025.**



**Department of Dermatology**

Baylor Medicine Jamail Specialty Care Center  
1977 Butler Blvd Suite E6.200  
Houston, TX 77030  
(713) 798-6131