

JASON P. HANSEN, MD

# PREPARING FOR MOHS SURGERY



Intermountain<sup>SM</sup>  
Memorial Clinic

## ABOUT MOHS SURGERY

*In preparation for your upcoming Mohs surgery appointment with Dr. Jason P. Hansen at Intermountain Memorial Clinic, we have prepared this pamphlet. Kindly take a few moments to review this material. Please complete the attached medical history form and bring this with you to your appointment.*

### What is Mohs surgery?

**A:** Mohs surgery is a specialized and highly effective technique for the treatment of skin cancer, especially basal cell carcinoma and squamous cell carcinoma. Developed by Dr. Frederic E. Mohs, the technique named in his honor differs from other skin cancer treatments by offering immediate and complete microscopic examination of the removed cancerous tissue. Precise excision of the skin cancer preserves the greatest amount of healthy tissue allowing for an aesthetic and functional reconstruction. This meticulous approach has made Mohs surgery the skin cancer treatment with the highest reported cure rate.

### What are the types of skin cancer?

**A:** More than one million skin cancers are diagnosed annually. Of these, the most common is basal cell carcinoma followed by squamous cell carcinoma then melanoma.

### What causes skin cancer?

**A:** One in five Americans will develop skin cancer in the course of a lifetime. Sun exposure is the main cause of skin cancer. In fact, a history of sunburns increases one's risk of developing skin cancer.

### **Are skin cancers life-threatening?**

A: Melanoma accounts for the majority of deaths due to skin cancer. Basal cell carcinoma is very rarely life threatening. Squamous cell carcinoma is generally not life threatening, except in aggressive disease in high-risk locations or in the setting of immune suppression, such as organ transplant recipients. Basal and squamous cell carcinomas do not turn into melanoma.

### **How is skin cancer treated?**

A: Multiple methods are available to treat skin cancer: freezing with liquid nitrogen, burning with electric current, radiation therapy, topical chemotherapy, and surgical removal. Mohs surgery is best suited for treating skin cancer in critical areas such as the head and neck where maximum preservation of healthy tissue is vital for both cosmetic and functional reconstruction.

### **What makes Mohs surgery so effective?**

A: While conventional surgical instruments are used to remove malignant tissue during surgery, it is what happens to that tissue after it is removed that makes the procedure so effective. After removing the obvious tumor, a thin layer of normal-appearing skin surrounding the tumor is then carefully removed and meticulously mapped. The specimen is processed in the Mohs laboratory, which takes about an hour. If cancer is present in the tissue upon examination under the microscope, the location is marked on the map and more tissue is removed. This step is repeated, as necessary, until the tumor is completely removed. A skin cancer may be larger than it appears. Microscopic growths may extend well beyond the visible outline of the tumor. Mohs surgery is specifically designed to treat these skin cancers by mapping and removing microscopic tumor.

### **What are the advantages of Mohs surgery?**

A: The advantages are two-fold – using the microscopic mapping, the surgeon is better able to remove all the cancerous tissue while preserving as much healthy tissue as possible.

### **Does a Mohs surgeon require special qualifications?**

A: This cutting-edge treatment, though developed in the 1930s, requires a highly specialized physician. The physician serves as both the surgeon and the pathologist. Physicians performing Mohs surgery should have specialized skills in dermatology, dermatologic surgery and dermatopathology. In addition to a dermatology residency, Dr. Hansen has advanced training in Mohs surgery and reconstruction through an accredited Mohs surgery fellowship. He directs a team of specialized nursing and laboratory personnel.

### **Will there be a scar after surgery?**

A: All surgery results in a scar. The appearance of the scar depends on the size and location of the skin cancer. The priority of Mohs surgery is to remove the skin cancer while preserving as much healthy skin as possible. This allows us to work together in our goal of removing the cancer and minimizing the scar. Through the body's own healing properties, scars naturally remodel over six to twelve months. If a scar behaves unexpectedly, there may be techniques available to improve its appearance.

### **Will stitches be used to close the surgical area?**

A: The wound size and location, as well as other factors, determine how your wound will be repaired. There are three basic ways to handle wound reconstruction:

**Stitches:** In most cases surgical wounds are stitched together from side to side or by rearranging nearby skin. Both absorbable and non-absorbable stitches may be used. Non-absorbable stitches need to be removed at a later date.

**Skin Graft:** In some instances, it is necessary to remove skin from another site and graft it over the wound using stitches. Skin is borrowed from discrete areas to hide the scar.

**Second intention healing:** The body is allowed to heal the open wound on its own. This takes approximately 3 to 6 weeks depending on the size of the wound. Regular wound care is required.

### Will I be awake during surgery?

A: Yes. Because the surgery takes place over the course of a day, in multiple sessions, local anesthesia is used to eliminate the risk of prolonged general anesthesia. Medication to reduce anxiety is available if needed at the time of surgery.

### How long will the procedure take?

A: Most Mohs surgeries can be completed in three or fewer stages, requiring less than four hours. However, it is not possible to completely predict how extensive a cancer is prior to surgery. Therefore, it is advisable to reserve the entire day for this surgical procedure, in case the removal of additional layers is required. Since much of the time is spent waiting for laboratory results, bring reading materials or other items to pass the time.

### What should I do to prepare for surgery?

A: **Medications:** If you are taking prescription medications, continue taking all of them prior to surgery unless otherwise directed by a physician. Previously,

common practice was to discontinue blood-thinning medications prior to Mohs surgery to reduce the risk of bleeding complications after surgery. However, recent studies have shown that the risk of bleeding problems is not significantly increased for patients continuing blood-thinning agents. Bleeding complications are always a risk of surgery, but fortunately are uncommon. More importantly, serious adverse events including stroke, heart attack, and blood clots in patients who discontinue blood-thinning medications have been reported. However, please list all your medications, including blood-thinning medications such as Coumadin, Plavix, aspirin, non-steroidal anti-inflammatory medications (such as Advil, Motrin, or Naprosyn), vitamin E, ginkgo, garlic, ginseng, ginger, ephedra or other nutritional supplements.

**Antibiotics:** Guidelines for antibiotics prior to skin surgery have recently been updated. Please prepare a list of your current medications and allergies and call our office before your surgery appointment if you have any of the following conditions requiring pre-operative antibiotics.

- Orthopedic prosthesis within the past two years
- An artificial heart valve
- History of infective endocarditis
- Congenital heart conditions
- Cardiac transplantation with heart valve problems
- Central nervous system shunts

**Recent cataract surgery:** Consult with your eye surgeon as to how soon you may undergo Mohs surgery. If your skin cancer is close to the eye, it may be wise to wait a few weeks.

**Food:** Eat breakfast the morning of surgery. Also bring a snack or lunch for later in the day.

**Sleep:** It is important that you obtain a good night's rest prior to surgery.

**Clothing:** Wear loose, comfortable clothing. Button down shirts are suggested if the treated area is on the torso.

**Support and Assistance:** It is advisable to arrange for someone to drive you home following surgery. Also, in many instances someone other than the patient must perform postoperative wound care. We will provide written instructions following surgery, demonstrate wound care, and answer any questions you may have. We ask that you not bring children.

### Will I have appointments after surgery?

**A:** Post-surgical follow-up visits to inspect the surgical wound or remove stitches may be needed and are generally scheduled about a week after surgery. After these you will return to your referring physician to resume routine skin cancer examinations.

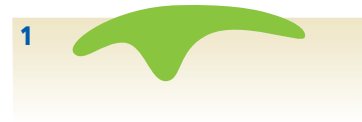
### Will my insurance cover the cost of surgery?

**A:** Most insurance policies cover the costs of Mohs surgery and reconstruction of the resultant surgical area. It may be necessary to obtain a referral or authorization from your primary physician or insurance company prior to surgery. Contact your insurance carrier directly for the most current payment information relative to this surgery.

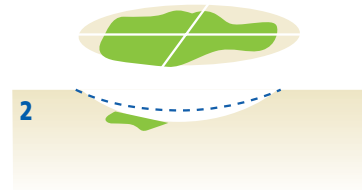
### What are Intermountain Memorial Clinic's office hours?

**A:** The Clinic is open from 7:30 a.m. to 5 p.m. Mondays through Fridays. Mohs surgeries are scheduled weekdays. Please see the back of this brochure for your appointment date and time.

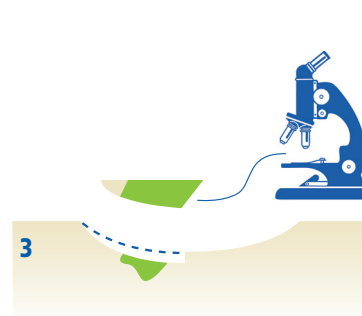
## MOHS SURGERY PROCESS



**STEP 1** The roots of a skin cancer may extend beyond the visible portion of the tumor. If these roots are not removed, the cancer will recur.



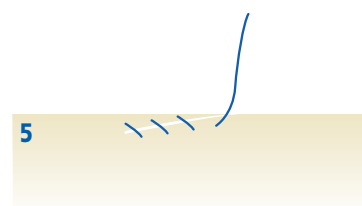
**STEP 2** The visible tumor is identified. A thin layer of skin around the tumor is removed and divided into sections. The surgeon then color codes each of these sections with dyes and makes reference marks on the skin to show the source of these sections. A map of the surgical site is then drawn.



**STEP 3** The undersurface and edges of each section are microscopically examined for evidence of remaining cancer.



**STEP 4** If cancer cells are found under the microscope, the surgeon marks their location on the map and returns to the patient to remove another layer of skin – but only from precisely where the cancer cells remain.



**STEP 5** Once all the skin cancer is removed, the wound is repaired.

**What telephone number should I call for scheduling information or for further details regarding surgery?**

**A:** During office hours or for urgent matters after hours call (801) 466-MOHS (6647).

**What should I know about post-surgery?**

**A:** If there is some discomfort following surgery, normally Tylenol is all that is needed for relief. However, pain medications will be prescribed if needed. You may experience some bruising and swelling around the wound, especially if surgery was performed near the eye area. Your activity will be restricted after surgery. Do not lift over 10 pounds the first week after surgery and do as little bending over, straining and stooping as possible. Plan to be off work for several days after surgery. Avoid any long trips within the first 10 days following surgery in case complications develop.

**What are the potential complications of surgery?**

**A:** Any procedure can result in complications or adverse events. Bleeding complications and infection are the two primary complications of Mohs surgery. However, both are uncommon.

**What if I need to reschedule an appointment?**

**A:** If you must change an appointment, please call us as soon as possible. This courtesy allows us to schedule another patient for care. Please do not fail to show for an appointment as this can cause delays for other waiting patients.



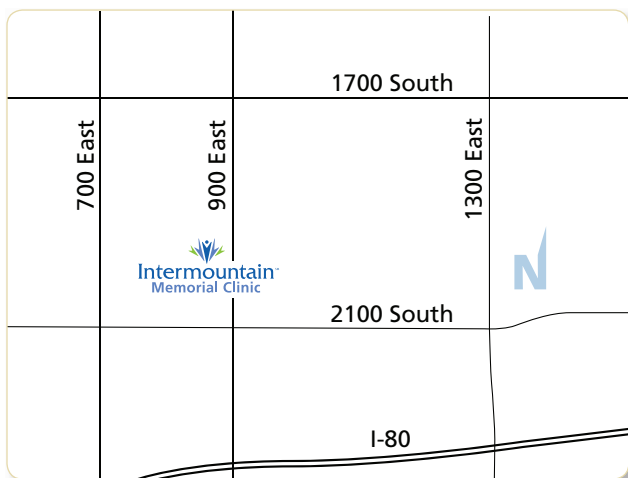
**Jason P. Hansen, MD**

Certified by the American Board of Dermatology, Jason P. Hansen, MD specializes in Mohs surgery. A Utah native, Dr. Hansen earned his bachelor's degree from Weber State University and medical degree from the University of Utah. He went on to serve an internship at LDS Hospital and then completed residency at the University of Iowa where he was chief resident of dermatology. With a fellowship in Mohs surgery and procedural dermatology at the Skin Surgery Center in Winston-Salem, NC, Dr. Hansen has highly specialized skills specific to this cutting-edge treatment. As a member of numerous dermatology research teams, Dr. Hansen has presented and published on a variety of dermatology topics including Mohs surgery.

Dr. Hansen recently joined the Intermountain Memorial Clinic, specializing in Mohs surgery.

**Your Mohs Surgery Appointment is  
scheduled for:**

Date: \_\_\_\_\_ Time: \_\_\_\_\_



**Intermountain<sup>SM</sup>  
Memorial Clinic**

Jason P. Hansen, MD  
2000 S 900 E  
Salt Lake City, UT 84105  
801.466.MOHS (6647)