Before Your Visit: Mohs Skin Cancer Surgery

Your Kaiser Permanente Care Instructions

Skin Cancer Information

What is skin cancer?
Skin cancers are tumors, or malignancies, of the skin. Skin cancer is associated with increasing age and increased sun exposure, however many patients who develop skin cancer are quite young and have had minimal sun exposure.

The two common types of skin cancer are:
- Basal cell carcinoma (most common)
- Squamous cell carcinoma

How is skin cancer treated?
There are several different methods available for treating skin cancer, including excisional surgery, radiation therapy, curettage combined with electrical burning (ED&C), freezing (cryosurgery), and topical treatments such as imiquimod (Aldara). Sometimes these methods are unsuccessful because the skin cancer has an extensive root system, similar to the roots of a tree.

What causes of skin cancer?
The causes of skin cancer are not completely known. There are, however, several risk factors that increase a person’s risk of skin cancer. Risk factors for skin cancer include:
- Previous history of skin cancer
- Older in age
- Spending a lot of time in the sun over many years
- History of blistering sunburns
- Fair skin
- Light hair or eye color
- Use of steroids or other medications that suppress the immune system
- History of radiation exposure

How does skin cancer begin?
Skin cancer starts growing in the top layers of the skin and grows down, forming roots to the tissues below the skin. Skin cancer can spread horizontally along the surface of the skin. These roots cannot be seen directly. What is seen on the surface of the skin may be only the “tip of the iceberg”.

Is skin cancer dangerous?
The common skin cancers:
- Basal cell carcinomas can enlarge but almost never spread (metastasize) to other parts of the body. Treatment is almost always successful.
- Squamous cell carcinomas can spread, but usually slowly so that they are not very dangerous.

If the skin cancer is not completely removed, both basal cell carcinoma and squamous cell carcinoma can grow and destroy structures in their path.

Compared to other forms of skin cancer, these types of skin cancer are generally recognized in the early stages and are more easily cured. Other forms of skin cancer may also be treated with Mohs Surgery.
**Mohs Surgery**

**What is Mohs surgery?**
The goal is total removal of skin cancer and to only remove the diseased tissue.

**Steps of Mohs surgery:**
1. The area is numbed using a local anesthetic.
2. The doctor removes the visible skin cancer and a small amount of tissue around the tumor.
3. The removed tissue is marked to tell the top from bottom and right from left.
4. The removed tissue is examined by the doctor for skin cancer.
5. If any of the edges of removed tissue contain skin cancer, the doctor removes another thin layer of tissue. Tissue is only removed from the area where skin cancer cells were seen.
6. The doctor examines the newly removed tissue for additional cancer cells.
7. If the doctor still sees skin cancer, the steps repeat until the cancer is completely removed.

**How many rounds of skin cancer removal will I need during Mohs surgery?**
If skin cancer cells are seen at the edge of the removed tissue, there is more skin cancer that must be removed. The benefit of Mohs surgery is that the doctor will remove only the areas of tissue where there is skin cancer. This will help you keep as much of your normal tissue as possible.
- About half of all tumors require only one removal.
- Half of all tumors will need multiple tissue removals during your Mohs surgery.

**What are the advantages of Mohs surgery?**
- Locates skin cancer and selectively removes only those areas.
- Skin cancer roots are removed.
- As much normal tissue as possible is kept.
- 97% to 99% success rate, even if other forms of treatment have failed.
- Excellent chance of curing the skin cancer.
- Less waiting time for results than other skin cancer surgery.

**Why should I try Mohs surgery when other surgery has not worked?**
Other methods to treat the skin cancer may not have worked because it did not destroy all of the skin cancer cells. Mohs surgery finds the roots of the cancer and cures almost all patients.

**Preparing for Mohs Surgery**

**Pre-operative visits**
For most, the pre-operative visit is part of your Mohs surgery appointment.

Sometimes a pre-operative visit is needed by the surgeon or by your referring doctor. If for any reason you need a pre-operative visit or your referring doctor needs a visit, we will schedule an appointment for you.

**Two weeks before surgery:**
- If you have a history of heart attack, cardiovascular disease, irregular heartbeat, stroke, or TIA's (mini-stroke) and if you are taking Coumadin®, Plavix® (Clopidogrel), and/or Aspirin continue taking as prescribed.
- If you do not have a history of heart attack or stroke and you are taking Aspirin for prevention stop taking all aspirin and aspirin containing products.
- Stop taking all herbal medications that may thin your blood (see Medication Precautions handout).
- Never discontinue any prescription medication until you have checked with your doctor.
- If your skin cancer is on your face, place notify us if you use a CPAP machine at night.
- Arrange for someone to drive you home from surgery. We encourage all patients to have a ride but, you need to have someone drive you home from the procedure if:
  - Your skin cancer is located very close to the eye.
  - You are anxious and would like medication to help to relax you during your surgery.

**A few days before surgery:**
- If you become ill (have a cold, fever, or think you have been exposed to illness (and might become sick) please call your surgeon.
- Confirm your driver.

**The night before surgery:**
- Try to get a good night's rest!
- Wash your hair if your skin cancer is on your scalp. You will not be able to wash your hair for a few days after surgery.

**The morning of surgery:**
- Eat a light breakfast, unless otherwise directed.
- Take your medications as usual unless otherwise directed by your doctor (see Medication Precautions handout).
- Do NOT wear make-up or jewelry.
- Do NOT shave the area around your skin cancer.
- Wear comfortable and loose fitting clothes.
- Please bring the following items to your surgery appointment:
  - Photo ID and Kaiser Permanente ID card
  - If you have a pacemaker or defibrillator: you are required to bring your "device information card" to surgery. If you do not have a card, please call Cardiology at 303-764-4941 to get one.
  - CPAP mask, if you wear a CPAP and your skin cancer is on your face.
  - A book or magazine. The procedure may take a full day. You will spend part of the time in the waiting room while your tissue is examined.

**The Day of Surgery**

Please arrive 15 minutes early for your Surgery appointment at the Kaiser Permanente Rock Creek Medical Office. Address: 280 Exempla Circle, Lafayette, Colorado 80026. The dermatology department is on the 4th floor.

After you check in, a surgical assistant will bring you to the surgery area. They will ask you a few questions and check your vital signs. The assistant will also prepare your skin for surgery. Your surgeon will check-in with you and see if you have any questions.

**Removing the skin cancer**
You will be given a local anesthetic before your surgeon removes the skin cancer. After the tissue has been removed, a machine is used to stop the bleeding. This machine generates heat and it might feel warm.

The surgical assistant will cover your wound with a bandage and your tissue will be sent to the lab for examination by your surgeon.
While you are waiting for results
It will take 1 to 2 hours to look at the tissue. While you are waiting, you will relax in the waiting room. A friend or family member can go to the cafeteria to pick up a snack for you if needed. It’s important to stay in the waiting area during this time.

Same day results
If the lab sees skin cancer on your removed tissue, the procedure will be repeated as soon as possible. Several tissue removal and tissue lab exams may be done in one day. Most people do not have to return the following day for additional surgery.

Most people need 2 or 3 removal procedures and have their entire skin cancer removed by mid-day.

This is an outpatient surgery. Most people are able to go home the same day. It is rare you would need to stay in the hospital overnight.

The Surgical Wound

There are 3 ways to treat the wound after surgery:

- Closing the wound directly with stitches (sutures)
- Letting the wound heal by itself (granulation)
- Closing the wound with a skin graft or flap

Your doctor will recommend the best treatment for you. Treating the wound after surgery will be done by Dr. Annest. Rarely, in special situations we will plan ahead for other surgical specialists to repair your wound. Each patient is different and we will choose the treatment that will work best for you.

Healing
You may be asked to buy the Mohs dressing kit from the Kaiser Permanente pharmacy. You will get specific instructions on how to care for your wound at home.

You will need to rest for at least 2 days, possibly longer, after surgery. You may not exercise or lift heavy items for at least 2 days.

You will have a large bandage over the surgery area for at least 2 days.

During the first few days or weeks, it is normal to feel tightness as your surgery wound heals. You will feel this less and less. Sometimes, skin cancers may spread to involve nerves and it may be one or two years before your sensation returns to normal. In some cases, the numbness may be permanent.

If your wound is itchy, a thin layer of petroleum jelly may help to relieve the itch.

Scarring
Any form of skin surgery will always leave a scar. Mohs surgery decreases this as much as possible. We make every effort to get the best cosmetic result for you. The new skin that grows over the wound can have many more blood vessels than the skin that was removed. This causes a red scar that can be sensitive. Redness and sensitivity will decrease over time.

Your wound will heal for 1 year after surgery and will look better during this time.

Follow-Up Care After Surgery
After your Mohs surgery, you will come in for regular check-ups for 3 years. Studies show that if the skin cancer is going to come back, it will within the first few years. Also, if you have had skin cancer once, you are at an increased risk for getting skin cancer again.

- Check with your dermatologist on how often you should have skin checks.
- If you notice any suspicious areas, signs, or symptoms of skin cancer it is best to check with your dermatologist to see if further testing is needed.
The sun shines brightly here in Colorado! While you should not spend the rest of your life in the dark, we know the sun is a big factor in the development of many skin cancers. **It is important that you protect your skin from the sun:**

- Apply sunscreen (SPF of 30 or more) every day to all exposed areas of your skin. This includes your face, ears, hands, and any other areas.
- Reapply sunscreen *every 2 hours*!
- Wear a broad-brimmed hat and clothing that will cover your skin.

Yes, you may lead a normal lifestyle if you take precautions!

Where Can I Learn More About Skin Cancer?

Go to [kp.org](http://kp.org) and type ‘skin cancer’ in the search box.