

A GUIDE TO YOUR MOHS' SURGERY PROCEDURE

A TREATMENT FOR SKIN CANCER

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YOUR SURGERY IS SCHEDULED FOR

AT _____ A.M.

WHAT IS SKIN CANCER?

The most common types of skin cancer are BASAL CELL CARCINOMA and SQUAMOUS CELL CARCINOMA. Both types of skin cancer enlarge over time but usually do not metastasize (move to different areas of the body). If left untreated skin cancers will form a non-healing ulcer, which will gradually enlarge. If the cancers are not completely removed, they can invade and destroy adjacent structures such as the eye or nose. Before the advent of modern medicine skin cancers of this type were often fatal. Compared to other forms of cancer; skin cancers are generally recognized in their early stages and are more easily cured.

MELANOMA may be life threatening if not treated early. It usually appears as a brownish-black spot or a bump in the skin, which enlarges and sometimes bleeds. Melanomas can originate in moles that have been present for many years. If you find a suspicious looking mole, please have your referring physician or Dr. Maloney examine it as soon as possible.

WHAT IS THE CAUSE OF SKIN CANCER?

The cause for skin cancer is not completely known. Excessive exposure to sunlight is the single most important factor associated with the development of skin cancer. It appears most commonly on the head, neck and arms (the most sun-exposed parts of the body). Fair-skinned people tend to develop skin cancer more frequently than dark skinned people do. Skin cancers are more common in the southern and Rocky Mountain states. Skin cancer is seen more often within certain ethnic groups, such as English, Scottish, Irish and Scandinavians. The tendency to develop skin cancer could be inherited, along with your complexion. However, skin cancers are certainly not limited to these ethnic groups.

HOW DOES SKIN CANCER START?

Skin cancer begins in the uppermost layer of the skin and grows downward forming roots and spreading horizontally throughout the area. One can compare the skin cancer growth to a plant. There is a visible result on the surface, but underneath is a complex root system that is impossible to know exactly where it extends. Therefore, what is apparent to the naked eye may only be the "tip of the iceberg".

HOW IS SKIN CANCER TREATED?

There are several methods of treating skin cancer, all very successful in the majority of patients. These methods include:

- Excision and suturing (surgical removal and stitches)
- Curettage and electrodesiccation (scraping and burning with an electric needle)
- Cryosurgery (freezing)
- Mohs' surgery (microscopically controlled excision and stitches)

The treatment method chosen depends on several factors such as location, size, severity, and previous treatment of the skin cancer. The types of skin cancers most often treated by Mohs' surgery include the following:

- Cancers on or around the nose, ears or eyes
- Cancers treated before then recurred
- Cancers that have a scar-like appearance and feel
- Cancers with a hard-to-judge border
- Some types of skin cancers in younger patients

WHAT ARE THE ADVANTAGES OF MOHS' SURGERY?

The microscopically controlled excision technique was first developed by Dr. Frederick Mohs'. There are many advantages to using Mohs' surgery. The first is that it assures complete removal of the skin cancer, while preserving as much normal skin as possible. The surgery is performed in the office so there are no operating room or hospital fees. It is much more relaxing. The surgery is safe, reliable, and has a significantly higher cure rate than any other available technique, even when dealing with the most difficult tumors. Mohs' surgery has a cure rate approaching 99% for tumors not previously treated. Cancers previously treated and that have

recurred; the cure rate for Mohs' surgery is around 95%. There is an excellent chance of cure, but no one can guarantee it to be a 100%.

Another advantage of Mohs' surgery compared to classical surgery done in a day surgery center or hospital setting is the cure rate is higher using Mohs' surgery. The day in Mohs' surgery may be longer, but when you go home be assured that the cure rate is the highest of any type of surgery or treatment for your type of skin cancer.

WHAT ARE DR. STEINBAUGH'S QUALIFICATIONS?

Dr. Steinbaugh is board-certified in Family Medicine and Dermatology. He has also completed additional fellowship training in Mohs' Surgery. Dr. Steinbaugh was on the faculty at the University of Colorado in Family Practice prior to return to the University of North Carolina for a residency in dermatology. He was Chief Resident in Dermatology at the University of North Carolina. Dr. Steinbaugh finished his residency training in dermatology in 1985. Dr. Steinbaugh has practiced in Boulder and Louisville since 1985. He completed a one year fellowship in Mohs' surgery at the University of Tennessee in Memphis, in 1990. Dr. Steinbaugh has performed upwards of 22,000 Mohs' procedures. He and Dr. Maloney have worked together providing Mohs' surgery services at Cherry Creek Dermatology, PC for almost twenty years.

HOW IS MOHS' SURGERY PERFORMED?

Mohs' surgery is performed in an office setting under local anesthetic. The skin that appears to be involved in the tumor is removed, color-coded, and mapped out for identification and orientation. The tissue is processed and microscopic slides are prepared onsite after which the entire periphery and undersurface of the specimen is examined microscopically to detect any residual cancer. If cancerous cells remain, another layer of tissue is removed only from the area where the cancer was seen. This process is repeated as many times as necessary until the area is free of cancer.

HOW LONG DOES THE SURGERY TAKE?

Each stage of the surgical procedure takes about 15-20 minutes to remove the area of cancer. Preparing the tissue slides for examination by Dr. Steinbaugh may take an hour to an hour or longer. Dr. Steinbaugh needs for the slides to be recut or restained. It may take several surgical stages and microscopic examinations to achieve a tumor-free plane. For these reasons we ask you to set aside the whole day. We will try to keep you informed of your progress.

There may be gaps in your treatment lasting an hour or more where it appears as if nothing is happening. Please bring reading material or something to occupy your time while you wait. There is a coffee shop and a sandwich shop in our building which you may visit, please let the front desk know that you will be leaving and let them check to see how long it will be before Dr. Steinbaugh will be calling you back from the waiting room. There are several pharmacies nearby; you may also take this opportunity to send your family member to have your analgesic prescription filled.

Please do not use your cell phones in the waiting room, you are free to talk in the hall or in the building lobby. Please remember to turn cell phones to “silent” while in the operating room!

Please remember that Mohs’ surgery and repair can be very complex and there are times when the wound will require bulky dressings that may obscure your vision. It is often best to arrange ahead of time to have someone available to drive you home. If you are in good health, have good hearing and eyesight and can understand and remember the postoperative instructions you do not need to have anyone accompany you during the day. Patients who are in poor health, need help with walking or visiting the bathroom, have limited hearing, limited vision or need help in remembering or carrying out the postoperative instructions would benefit from a friend or family member being available to help them during the day. Due to limited space in our office, please bring only one person. We also request that after the surgery you go home and rest.

When surgery is performed by Dr. Steinbaugh at Cherry Creek Dermatology, PC several Mohs’ patients are scheduled on the same day. Dermatology patients not having Mohs’ surgery are also seen during the day. Please don’t feel impatient if others seem to come and go while you are waiting in the reception area. At any time feel free to ask the receptionist to check with Dr. Steinbaugh about your individual progress.

AFTER THE CANCER HAS BEEN REMOVED

The surgery site will usually be wider and deeper than the area that was biopsied. Because the surgery is done in a layered manner under local anesthesia Dr. Steinbaugh is able to keep you informed on the depth, width, and involvement of and deeper structures. After you are free of cancer, Dr. Steinbaugh, Dr. Maloney or one of the staff will discuss with you options regarding wound site. Since there is no way to tell beforehand how deep or wide the defect will be we are unable to predict exactly what method of closure would be best for you defect until the Mohs’ surgery is finished. The options are generally:

- closing the wound with stitches
- letting the wound heal in on its own,
- covering the wound with a skin graft
- incorporating a local skin flap to close your wound
- using a cartilage graft or pedicle flap to reconstruct the defect

We will recommend which method we feel best suited for you. Occasionally the repair of the defect will be not be done at the Cherry Creek Dermatology, PC on the same day as Mohs’ but at another facility the following day. These types of arrangements must be made before the day of surgery.

Closures are done on a “first-come, first-served” basis. It may be that Dr. Steinbaugh is finished with a case before yours even though that patient’s surgery started after yours in the morning. The Mohs’ procedure can be a long day and after waiting for hours to have your surgery completed it is only natural to want to get finished and get home to rest and recuperate. Dr. Steinbaugh, Dr. Maloney, the physician assistants, medical assistants, and occasionally a dermatology resident from the University of Colorado Dermatology work together to get you fixed up and on your way home.

After the repairs are completed, we will instruct you on your postoperative care and give you instructions to take with you for future reference. You will leave with a sterile bandage that will extend at least 2 inches away from the surgical site. You will probably need to do daily cleaning and dressing changes and return a few times to the office during the next couple of weeks for wound checks, dressing changes and suture removal.

Please be aware that numbness over this area of the flap or graft is normal and occurs from the shearing microscopic nerves of the skin the feeling will usually return in 6-12 months.

HOW DO I PREPARE FOR THE DAY?

- Try to get a good night's sleep and eat a light breakfast. Shower the morning before surgery and do not apply makeup, lotions, sunscreen, or antibiotic ointment on the surgical area. Wear comfortable loose fitting clothes and shoes.
- Take medications as usual unless instructed otherwise. Certain medications and herbal supplements can cause complications with the surgery. These products can prolong bleeding. Discontinue aspirin and aspirin containing products 10 days prior to surgery, and discontinue any anti-inflammatory products 3 days prior to surgery. Please see Medication Precaution List included with this information.
- If you are taking aspirin any prescription blood thinners such as Coumadin or Plavix under the advice of your physician please get their permission and instructions regarding discontinuing these medications prior to surgery. Inform us if your doctor did not give you permission to stop these medications so that we may anticipate potential problems.
- We need to know if you have any medicinal allergies, especially to local anesthetics such as Xylocaine or Lidocaine.
- Certain individuals who have artificial joints, limbs, artificial heart valves or other heart conditions may need to take antibiotics prior to surgery or dental work. Please let us know if your physician has told you to take preoperative antibiotics. You should get a prescription filled and take the antibiotics the morning of your surgery.

WHAT SUPPLIES DO I NEED?

You may want to pick up some or all of these supplies prior to your Mohs' surgery for use at home after the procedure:

- Bacitracin or Polysporin ointment or Aquaphor ointment
- Hibiclens™ anti-bacterial soap
- Ice pack
- Q-Tips
- Extra-Strength Tylenol
- Saline solution (1/3teaspoon table salt in 8oz of clean tap water). You may buy saline contact lens solution to use as prepared saline or mix it fresh before each use.
- Non-stick gauze, absorbent gauze and tape. Many of the wounds are more easily covered with homemade or customized bandages rather than ready-made rectangular adhesive bandages.

WHAT HAPPENS ON THE DAY OF THE SURGERY?

We schedule the Mohs' surgery patients all in a row early in the day. All patients will be required to complete a consent form for Mohs' surgery stating that you understand the procedure and possible complications. Dr. Steinbaugh will examine the cancer and trace its visible border with skin marker. He then injects the site to numb the entire area. After allowing the Xylocaine to take effect, Dr. Steinbaugh cuts out the area of the skin cancer. After removal, local bleeding is stopped by means of cautery (burning). If you have any medical reasons that a cauterizing machine should not be used please let us know. Your wound will be dressed with a pressure bandage then you may return to the waiting room. The area of the skin that was removed is labeled and given to the technician. If the examination of the slides reveals that your tissue still contains cancer, you will be called back to the procedure room and the procedure will be repeated.

WHAT HAPPENS AFTER THE SURGERY?

You will be given postoperative instructions. You may need to return for a bandage change or wound check before having your sutures (stitches) out 7-10 days after the surgery. Please make sure that you make these appointments before you leave the office. You should go home, relax and keep ice on the area. Increase of blood flow to the surgical site may cause bleeding problems, swelling, and excessive scarring. We ask that you refrain from any activity that will cause you to get overheated and cause your blood vessels to dilate in the surgery area for several days after the procedure. By taking these precautions, you insure a speedy recovery with minimal scarring. Smoking severely limits the blood flow to the skin and has an adverse effect on healing. You should not smoke from the day of surgery until your suture is removed.

DOES THE SURGERY HURT?

We will use a local anesthetic, usually Xylocaine, to numb the wound site. Be sure to inform us if you experience anything more than a slight discomfort. Let us know if you start to have any pain while waiting between stages. We can re-inject the site or give you some pain medication. We provide the patients with prescription pain medications but some patients find that they don't need them and do quite well with just Extra-Strength Tylenol. You may only need a few prescription analgesic tablets for the first day or so, many patients have some prescription pain pills around the house from a previous surgery or injury that will carry them through. You should not drink alcohol, drive or operate machinery if you are taking prescription pain medicines. Many prescription analgesics contain the ingredient in Tylenol (acetaminophen) as well as a narcotic derivative. Be cautious taking the prescription medications and Extra-Strength Tylenol simultaneously, you may be getting too much acetaminophen. Please let us know beforehand if you are allergic to or cannot tolerate any of these medications.

WHAT ARE OTHER POSSIBLE COMPLICATIONS?

Swelling and bruising are common following Mohs' surgery, particularly when the surgery is performed around the eyes, cheeks, and forehead. You may get a "black eye." Bruising may take 3-4 days to become fully developed. Holding ice or a cold pack over the bandage (not directly on

the skin) for the first day or so will help minimize these problems. You may want to take a couple days off of work and clear your “social calendar” for several days so that you can recover quietly at home.

Infections may occur after surgery. If the site, drains pus, is tender to the touch, becomes hot or red, or if you have a fever please call the office.

WILL THERE BE FOLLOW -UP VISITS?

You may be asked to come back for additional visits until the doctor is confident in your healing. Patients with basal cell carcinoma or squamous cell carcinoma of the skin have a 50% chance of having a new cancer develop, somewhere *else* on their body during the 5 years after their original surgery. You should avoid the sun by using a high SPF sunscreen and protective clothing, perform monthly total-body self-examinations of the skin including under the underwear and in skin folds. Once the surgery site is healed you should return at the earliest sign of a changing skin lesion or in 6 months for a complete skin exam whichever is sooner.

MOHS' SURGERY MEDICATION PRECAUTIONS LIST

Dr. Steinbaugh would like you to stop taking aspirin 10 days before surgery and anti-inflammatory products such as Aleve or Ibuprofen 3 days before surgery. Please check listing below. If you are taking any of the medications listed below, for headaches, arthritis, menstrual cramps, etc., we strongly recommend that you switch to Tylenol for these symptoms. If you are taking aspirin or aspirin containing products at the advice of your doctor to prevent strokes, heart attacks, or arthritis please check with your doctor as to the advisability of stopping these medications before your surgery. We generally find the doctor is agreeable with you stopping these for a limited time.

If you are taking Coumadin however, it is imperative to ask your doctor if it is acceptable for you to stop or decrease the Coumadin before the surgery. Instructions for this must be obtained from your doctor. Remain on it but have a pro-time blood test done within 2 weeks prior to your surgery. The results may be faxed to our office 303-447-0794. Please put "To the attention of the Mohs' technician" on the fax cover sheet; you may also bring your results with you on the day of your surgery if you would rather.

Aspirin and products containing aspirin; stop 10 days before surgery:

Arthritis Pain	Ascription	Easprin	Excedrin
Anacin	Goodies Powder	Aspergum	Ecotrin
Alka Seltzer Aspirin	5AS.A	Bufferin	Empirin
St. Josephs 81 aspirin	Children's Aspirin		

Anti-Inflammatory products; stop 3 days before surgery:

Advil	Brufen	Darvon	Meclornen	Orudis	Trandate
Aleve	Cataflarn	Dolobid	Medipren	Phenaphen	Trental
Anaprox	Celebrex	Dristan	Midol	Phcnergan	Trigesic
Anaproxin	Cephalgesi	Feldene	Motrin	Plavix	Trilisate
APC	Cheracol	Fiorinal	Nalfon	Ponstel	Vanquish
Arthrotec	Clinoril	Haltran	Naprelan	Relafen	Vioxx
Ascodecn	Congesprin	Ibuprofen	Naprosyn	Rufin	Voltaren
Bextra	Cope	Indocin	Norgesic	Sine Aid	Zactri
Butazolidin	Corididin	Indomethacin	Nuprin	Toradol	Zorprin

Herbal products; stop 10 days before surgery:

Barberry	Cumin	Marijuana	Vitamin E
Belladonna	Foxglove	Onion	Wild Yam
Borage	Garlic	Quince	Wormwood
Black and Blue Cohosh	Ginkgo Biloba	Sage	
Cayenne	Jacobs Ladder	Strawberry Leaf	
Chamomile	Marigold	Valerian	

If you require antibiotics before surgery because of artificial joints or heart valve problems. Please get a prescription from your doctor and remember to take these before your surgery.