#### **ABOUT THE PHYSICIANS**

Mariana A. Phillips, M.D., is an associate professor of medicine at the Virginia Tech Carilion School of Medicine. Dr. Phillips earned



her bachelor's degree in biology from Roanoke College and her medical degree from Virginia Commonwealth University (VCU) School of Medicine. She completed her dermatology residency at VCU Medical Center and subsequently completed a oneyear fellowship in procedural dermatology and Mohs surgery at VCU. Prior to practicing at Carilion Clinic, she served as an assistant

professor in the Department of Dermatology at VCU Medical Center. Dr. Phillips is board certified by the American Board of Dermatology and is a member of the American College of Mohs Surgery, American Society of Dermatologic Surgery and American Academy of Dermatology. She has numerous academic achievements, including membership in the Alpha Omega Alpha Medical Honor Society; publications in various dermatologic literature; and lectures delivered to local, regional and state meetings.

Kyle A. Prickett, M.D., is an assistant professor of Medicine at the Virginia Tech Carilion School of Medicine. Dr. Prickett received



a bachelor's degree in neuroscience from the College of William and Mary and earned his medical degree from the University of Maryland School of Medicine. Following medical school, Dr. Prickett completed his dermatology residency at Geisinger Medical Center and served as chief resident during his final year. He subsequently completed a fellowship in micrographic (Mohs) surgery

and dermatologic oncology at Geisinger Medical Center. Dr. Prickett is certified by the American Board of Dermatology and is a member of the American College of Mohs Surgery. He is also a member of the American Society of Dermatologic Surgery and the American Academy of Dermatology. His journal publications and lectures have focused on optimal management of skin cancer, including surgical and non-surgical approaches.

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# **Skin Cancer and Mohs Surgery PATIENT GUIDE** CARILIONCLINIC.ORG



#### WHAT CAUSES SKIN CANCER?

Each year, approximately 1.2 million people develop skin cancer in the United States. There are many factors that contribute to the formation of skin cancers. The most important factor is sun exposure; however, skin cancers can develop in areas of the body that are not sun exposed. In some patients, skin cancers appear to be genetically determined. Other causes include chronic infections, X-ray exposure, trauma and injury. Patients diagnosed with skin cancer should take special precautions to protect themselves from the sun: using sunblock daily, wearing sun protective clothing and avoiding mid-day sun.

### WHY SHOULD SKIN CANCER BE REMOVED?

Cancers represent cells that undergo unpredictable growth patterns. The two most common types of skin cancer are basal cell carcinoma and squamous cell carcinoma. Basal cell carcinomas grow slowly and, if left untreated, may grow rather large, ulcerate and become locally destructive and disfiguring. Only rarely does basal cell carcinoma spread throughout the body. Squamous cell carcinomas are more aggressive and have the potential to spread to other body parts.

#### WHAT TREATMENTS ARE AVAILABLE?

There are multiple treatment options available for the management of skin cancer. The procedure chosen is often determined by the type of skin cancer, location, size and whether the lesion has been treated previously. A patient's age and health may also help determine the best treatment modality.

Treatment methods include:

- » Electrodessication and curettage (scraping the tissue and burning it with an electric needle)
- » Cryosurgery (prolonged freezing of the tumor, usually with liquid nitrogen)
- » Excision (cutting out the tumor and suturing the wound back together or closing the wound with a graft or flap)
- » Radiation therapy
- » Topical chemotherapy
- » Mohs micrographic surgery

The physician who has referred you is knowledgeable of the various treatment modalities used in treating skin cancers and has recommended Mohs surgery for the treatment of your skin cancer. Using Mohs micrographic surgery to treat skin cancers does not preclude the use of other modalities in the treatment of other lesions you may develop in the future.

### WHAT IS MOHS SURGERY?

Mohs surgery is an advanced technique in which the physician serves as the surgeon, pathologist and reconstructive surgeon. During the procedure, the surgeon removes a layer of skin around the visible portion of the tumor and performs an immediate microscopic examination of the tissue. This allows the surgeon to map out the skin cancer beyond what is visible to the naked eye and remove additional tissue from only the areas that are involved with the tumor. The removal process stops when there is no longer any evidence of cancer remaining in the surgical site. This technique provides a 95- to 98- percent cure rate for all lesions treated. And because it removes only the tissue involved with the tumor, postoperative defects are minimal, which results in a better cosmetic outcome.

#### WHAT SHOULD I DO PRIOR TO SURGERY?

Most patients will be seen in consultation or will be contacted by our team by telephone prior to surgery. During the consultation, the procedure, including its risks and benefits, will be carefully explained.

Medications for high blood pressure or other conditions that have been prescribed on a regular basis should be continued on the day of surgery. Please eat a good breakfast on the day of surgery and feel free to bring a snack with you.

You should bathe and wash your hair the morning of surgery as you may have a bandage that will need to be kept dry for several days after the procedure. Please do not wear makeup or earrings on the day of your surgery. You are encouraged to wear a button-down shirt for the procedure to facilitate disrobing if required. It is preferable that you choose dark-colored clothing (red, black, navy) in order to prevent staining with body fluids or iodine-based surgical scrubs.

During the preoperative consultation, you will be asked if you are taking blood thinners (aspirin, ibuprofen or coumadin) or other medications that may affect the ability of your blood to clot or your healing abilities. In general, you will be instructed to continue your blood thinner. We recommend that you check with your prescribing physician prior to interruption of therapy. If you have a pacemaker, defibrillator or implantable device (e.g., a deep brain stimulator or cochlear implant), let us know prior to the date of surgery as we will have to take special precautions during the procedure. You should be accompanied by a family member or friend the day of the surgery, as eyelid swelling is very common and you may not be able to wear glasses or drive.

### **OUR TEAM**

Our operating team is led by a fellowship-trained Mohs surgeon and consists of nurses, histologists, residents and students. The role of the Mohs nurses, all of whom are licensed, is to assist the Mohs surgeon with the surgical procedure and make sure you are comfortable. A histologist will process your tissue in the laboratory and prepare the slides for review. Dr. Mariana A. Phillips and Dr. Kyle A. Prickett are on faculty at the Virginia Tech Carilion School of Medicine and are involved in the training of medical students and residents. A student or resident may be present during your surgery.

#### WHAT SHOULD I EXPECT THE DAY OF THE SURGERY?

The Mohs surgery procedure is done under local anesthesia. Photographs are taken before, during and after surgery. The majority of your time will be spent waiting for the slide preparation and interpretation. Once the tissue has been surgically removed, the wound is dressed with a temporary bandage and you will be escorted to a waiting area to rest while the tissue is being processed. The number of times you return to the surgical suite for removal of tissue is determined by the results of microscopic examination of the tissue. The tumor may require only one stage for complete removal, or multiple stages. The surgery is continued until the tumor is completely removed by the microscopic examination. You should plan to spend the entire day in the clinic. The procedure may last from a couple of hours to several hours, rarely running into the next day. You should not have any travel plans scheduled within two weeks following the procedure.

#### WHAT HAPPENS ONCE THE SURGERY IS COMPLETE?

The wound created by the surgery can heal in a variety of ways. It can heal by second intention, be closed with stitches or be reconstructed with a flap or skin graft. The final determination of the best reconstructive procedure will be made once the cancer has been completely removed with the Mohs technique. All surgeries performed in our office are under local anesthesia. On rare occasions, you may be referred to another specialist if the surgical defect exceeds what we are comfortable repairing in the office.

#### SECOND INTENTION (HEALING NATURALLY)

Second intention wound healing means allowing the wound to heal naturally with daily care. Depending on the size and location of the wound, it may take from four to eight weeks for a wound to heal. Wounds that are allowed to heal by this

surgery.

Your wound may be closed by stitches (sutures) that need to be removed (generally one week after the surgery) or by stitches that dissolve on their own.

# **Postoperative Expectations**

# PAIN AND BLEEDING

Pain after surgery varies considerably. Most discomfort can be controlled with Tylenol. Medications containing aspirin or ibuprofen should be avoided because they increase the risk of bleedina.

Bleeding may occur after the wound has been dressed. Activities such as bending and lifting can increase the risk of bleeding and should be limited after surgery. If bleeding occurs, the wound dressing may become saturated with blood. The soaked dressing should be removed and firm steady pressure applied (continuously for 20 minutes) to the base of the wound with a clean cloth. If bleeding does not stop, you should contact the physician at 540-581-0170 during office hours, 8 a.m. - 4:30 p.m. Call 540-981-7000 if you need help after hours. Swelling and bruising may develop shortly after surgery, especially when surgery is performed on areas near the eyes such as the forehead and nose.

# **FOLLOW-UP VISITS**

In general, sutures will be removed one week after the surgery. Future follow-up visits may be scheduled one to three months after the procedure. To schedule an appointment, please call 540-581-0170.

method may initially have a mild to moderate amount of clear drainage. The base of the wound is initially red but may become somewhat gray or yellowish in appearance. Detailed written and verbal wound care instructions will be provided following the

## **CLOSED WOUNDS (SUTURES, GRAFTS AND FLAPS)**

### SCARRING

There is no form of surgery that does not leave a scar. However, the tissue-sparing nature of this procedure reduces the size of the scar.