

PENNSYLVANIA DERMATOLOGY GROUP, P.C.
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WHY IS MOHS MICROGRAPHIC SURGERY BEING RECOMMENDED TO YOU

Though cause for concern, a diagnosis of skin cancer should not be cause for panic. While most skin cancers are not life threatening, once diagnosed they need to be treated within an appropriate time frame. There are a number of treatments available for skin cancer. ***Mohs surgery is most often recommended when it is necessary to microscopically ensure removal of the entire skin cancer, typically in the following circumstances:***

- Skin cancers with poorly defined borders
- Skin cancers with aggressive behavior or histology
- Large skin cancers
- Skin cancers that have come back after previous treatments
- Maximum preservation of healthy tissue to ensure optimal function and cosmetic appearance after surgery (eyelids, nose, ears, lips and other areas of the head and neck)

Prior to scheduling your procedure, you will first have a detailed **Mohs pre-operative consultation**. This consultation is important to examine your skin cancer, evaluate your medical history, explain the procedure in detail, and to make sure we do not need to do any further testing or referrals prior to the surgery. Because all skin cancers are not alike, the course of treatment is determined by the type of skin cancer. The pre-operative consultation will allow us to determine if Mohs surgery is the best treatment for you.

Originally developed by Dr. Frederic Mohs in the 1930's, Mohs micrographic surgery has been refined into the most advanced, precise, and effective treatment for an increasing variety of skin cancer types. The Mohs surgical process involves a series of excisions followed by immediate microscopic examination of the tissue to assess if any tumor cells remain. These steps are repeated until all samples are free of cancer. Because of this precise microscopic mapping technique, the tumor "roots" can be removed while sparing much of the surrounding normal skin. The result is a surgical procedure that offers outstanding cure rates while also minimizing the cosmetic impact of the treatment.

Mohs surgery is performed as an outpatient procedure in our office. We have an on-site laboratory for immediate processing and microscopic examination of tissue. Typically, surgery starts early in the morning and is completed the same day, depending on the extent of the tumor and the amount of reconstruction necessary. The steps to anticipate on the day of your surgery are outlined below:

Step 1: Anesthesia and Removal of the Visible Tumor

The first part of the procedure is very similar to the biopsy and only takes a few minutes. Local anesthesia is administered around the area of the tumor. The skin is then marked to create a map, which will serve as a guide to the precise location of any residual cancer cells. You will be awake during the entire procedure. The use of local anesthesia versus general anesthesia provides numerous benefits, including the prevention of lengthy recovery and possible side effects from general anesthesia. You are completely numb in the area of the surgery, though, so the procedure is comfortable.

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Dr. Regan will then remove the visible tumor along with a thin layer of healthy surrounding tissue. This rim of normal tissue around the tumor is known as the **tumor margin**. Any bleeding will be stopped with a machine that seals blood vessels. The assistant will apply a dressing to the site after which you will be able to relax in the waiting room while the tissue is processed and examined.

Step 2: Process and Examine Tumor Margin

Once removed, **the tumor margin is taken into the lab to be examined for remaining cancer cells**. The skin specimens are first divided into slices that are numbered, mapped, and color-coded in the exact same orientation as the map on your skin. Next, frozen section slides are prepared and examined microscopically by Dr. Regan to determine if the tumor margins are clear of cancer. The process of removing a specimen, preparing and examining the slides is called a LAYER. This typically takes about 1 hour, though it may take longer.

Step 3: Additional Layers – Ensuring all Cancer Cells Have Been Removed

If any of the microscopic sections contain skin cancer cells, you will return to the procedure room and an additional layer of tissue is removed. The map will guide Dr. Regan to the precise location where tumor roots remain. The tissue is then processed and examined as previously described. This process continues layer-by-layer until all microscopic sections are clear of cancerous cells. Using this technique allows Dr. Regan to trace his way through the edges of the tumor, ensuring that all of the cancerous tissue is removed and minimizing the loss of surrounding healthy tissue. While there are always exceptions to the rule, most tumors require 1 to 3 layers for complete removal.

Step 4: Reconstruction

When the margin no longer contains cancerous cells, we have successfully removed the entire tumor and your wound is ready for repair. The best method for reconstruction is determined after the cancer has been completely removed and the extent of the surgical defect is known. The primary considerations are preservation of function and maximizing the aesthetic outcome. Dr. Regan will assess the wound, discuss the repair options and give post-operative care instructions. Depending on your specific needs and wishes, together you will choose one of the following methods:

- Stitch the wound together
- Let it heal by itself
- Move nearby skin to cover the area (called a FLAP)
- Move the skin from another part of the body to cover the area (called a GRAFT)

Mohs surgery recovery tends to be easily manageable because of the use of local anesthesia and the careful tissue-sparing surgical techniques. Dr. Regan has extensive training and experience in reconstructing complex surgical wounds. If reconstruction is needed, he most often performs the surgery to repair the area the same day as the tumor removal.

If you should have any questions or concerns, please feel free to contact our office at and we are happy to assist. We look forward to seeing you.