

Carolina Skin Surgery Center Monthly Newsletter

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[Mohs not "Moe's" surgery](#)

By: Marc Carruth, M.D.

When people first hear about Mohs surgery, many may think it's spelled "Moe's" and images of fast food Mexican from Moe's Southwest Grill or Moe from The Three Stooges bending the teeth of his saw as he attempts surgery on Curly's "rock hard" head may come to mind. Well I can assure you that no burritos are served and we certainly use more delicate instruments than Moe may have used on Curly's head in some of those famous slapstick episodes. So where does the name Mohs come from in Mohs micrographic surgery? That's what I'd like to share with you in this brief history of the technique.

The name Mohs comes from the developer of this technique, Dr. Frederick Mohs. He developed the concepts and procedures that have led to this specialized form of highly effective skin cancer removal surgery. In 1933, as a 23 year-old research assistant at the University of Wisconsin, he discovered that a zinc chloride solution injected into rats would preserve the tissue he injected it into. He was able to combine this solution with other ingredients to create a paste that could be applied to the skin. The paste would "kill" the tissue it was applied to allowing for bloodless surgery, but preserve the cellular detail. This allowed him to quickly freeze the tissue and look at it under the microscope to see if all the cancer was gone.

In 1936, after completing his surgery training, he began performing the procedure on skin cancer patients. It was originally referred to as chemosurgery due to the usage of the paste. It took many hours, up to an entire day, for the paste to do its job. Once the tissue was ready he used a scalpel to remove it in a saucer-shaped fashion. Once removed, he cut the tissue into smaller sections, applying colored dyes to the edges of each piece to color code them and drew a map of these color-coded tissue pieces. Reference marks were made on the surgery site to show where each piece came from. The tissue was prepared and processed so that he could look at the entire edge and undersurface of each piece and determine if any cancer remained at the margins. If he saw any cancer he referred to the color codes and the map to designate where the remaining cancer was located on the patient and he removed more tissue in that area. The advantage of this procedure over previous techniques for skin cancer removal was the ability to examine the entire "true" margin of the tissue. The disadvantage was that it was a laborious process requiring several visits over the course of days to allow the paste to do its job. Once the cancer was gone, another waiting period of about a week was required to let the scab created by the paste fall off before surgically repairing the defect.

In the 1950's Dr. Mohs began experimenting with leaving the paste off around the eyelids of patients to avoid irritating the eyeball. He referred to this as the "chemosurgery fresh tissue technique." He found he was able to perform the surgery with excellent results and began regularly using this technique around the eyes. Surgeons were hesitant at first to perform the surgery without the paste due to its ability to control bleeding and the thought that it may also play a role in cancer cure. But, as more surgeons began leaving the paste off in other body areas and had effective results, performing the surgery without the paste became more popular. It allowed them to complete the procedure in a single day with repair of the defect on that same day as well.

Eventually, because the paste was no longer used, surgeons began referring to the technique as micrographic surgery. Because Dr. Mohs developed the technique, the governing society of surgeons performing this procedure eventually agreed to call it Mohs micrographic surgery in the mid 1970's. Nowadays, it has been shortened to Mohs surgery for the sake of simplicity.

So there you have it and now you know the origin of Mohs. Sorry we don't have burritos but I can promise you no "Stooge" antics during your visit!

Announcements for April:

- Friday, April 1st – April Fool's Day!
- Thursday, April 21st is National High Five Day. ☺
- Tuesday, April 26th is Sandy's SIX year CSSC anniversary!
- Wednesday, April 27th is Administrative Professionals Day.



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CAROLINA SKIN SURGERY CENTER

"Specializing in the treatment of skin cancer"

About Dr. Carruth:

Dr. Marc R. Carruth is the Director of Carolina Skin Surgery Center. Dr. Carruth received his M.D. degree from Duke University where he graduated with highest honors in 1993 and was inducted into the Alpha Omega Alpha Medical Honor Society. He was awarded a Howard Hughes Medical Institute fellowship at the National Institutes of Health.

Dr. Carruth completed his internship in Internal Medicine at Harvard, Brigham and Women's Hospital in Boston, Massachusetts and a Dermatology residency at Emory University in Atlanta, Georgia where he was chief resident. Dr. Carruth completed his Mohs Micrographic and Dermatologic Surgery fellowship at Baptist Hospital in Kansas City, MO.

Dr. Carruth is known for his personable bedside manner and has been providing excellent care to patients in the Charlotte region since 1997. He has performed thousands of Mohs micrographic procedures during his tenure.

About Lisa Matuga, PA-C:

Lisa is a Certified Physician Assistant and has been providing excellent dermatologic care in the Charlotte area for over five years.

Lisa received her Master of Science in Medicine and graduated from the Physician Assistant Program at Western Michigan University in 2008. She has a passion for helping patients with their dermatological needs. She has been a part of the CSSC team since September of 2013.

Meet the Team:

Administrative Assistant: **Sandy** - She always has a smile on her face and is willing to help with anything. Sandy has been a part of the team since April of 2010.

Billing Specialist: **Cathy** – Understanding health insurance can be overwhelming, but Cathy is always willing to call and verify benefits and then explain them to you as simply as possible. Cathy has been a part of the team since December of 2008.

Surgery Coordinator / Certified Clinical Medical Assistant: **Ashley** – She assists Dr. Carruth and Lisa Matuga, PA-C with procedures and also handles the surgery scheduling. If you have had Mohs surgery then you have probably spoken with her! Ashley has been a part of the team since May of 2011.

Registered Medical Assistant / Lab Technician: **Jackie** – She assists Dr. Carruth and Lisa with procedures and also helps process the tissue in the lab. Jackie has been a part of the team since October of 2008.

Certified Surgical Technician: **Cynthia** – She assists Dr. Carruth and Lisa with procedures and has been a part of the team since September of 2009.

Certified Clinical Medical Assistant / Surgery Coordinator: **Chiffon** – She assists Lisa Matuga, PA-C with patients and handles surgery scheduling. She has been a part of the team since August of 2014.

Certified Clinical Medical Assistant / Lab Technician: **Lynn** – She assists Dr. Carruth and Lisa with procedures and also helps process the tissue in the lab. Lynn has been a part of the team since July of 2015.

Office Manager / Certified Medical Practice Executive/ Certified Professional Coder / Certified Physician Practice Manager: **April** has been a part of the team since August of 2006. Please let her know if you have any suggestions or comments – we encourage feedback and are always willing to learn and improve.

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