

Key Moments in the History of Dermatologic Surgery (1952-2000)

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The history of surgery in dermatology (“dermatologic surgery”) is rich with significant developments and advances by multiple individuals. Only a few of these pioneers can be highlighted in this report because of space limitations. My apologies to colleagues and friends who have not been included or mentioned in this article. The Timeline: Major milestones in the history of dermatologic surgery in this article tells some of the story. The biographic pieces on 15 outstanding physicians add additional detail and perspective. Many major developments have occurred since 2000, but they are beyond the scope of this article.
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Dermatologic surgery has evolved over many years. Many dermatologists have contributed and made dermatologic surgery what it is today. It would be impossible to mention everything and everyone, but this article will hit many of the high points.

Leon Goldman, MD (1906-1997)

Dr Goldman served as Chair of Dermatology at the University of Cincinnati for many years. He is acknowledged as the father of lasers in medicine and surgery. In 1961, he was the first physician to treat patients with lasers. This began 3 decades of leadership, practice, and research in dermatology. After Dr Goldman retired from the University of Cincinnati as Professor Emeritus, he always referred to the appointment as “Professor Demeritus” (Fig. 1).

Frederic E. Mohs, MD (1910-2002)

Frederic Mohs was not a dermatologist, but he should have been. He developed the fixed-tissue technique using zinc chloride paste while a medical student at the University of Wisconsin. He completed a year of general surgery and began

treating patients the next year. Patients with advanced skin cancers traveled to Madison to be treated. Mohs was dedicated to his craft, usually working 6-7 days per week in the office. He would arrive early in the morning and depart long after everyone else had left for the day. Many dermatologists traveled to Madison to learn. They embraced his techniques because of their residency training in skin cancer diagnosis and dermatopathology. When Mohs founded the American College of Chemosurgery (now the American College of Mohs Surgery [ACMS]) in 1967, it was largely dermatologists who comprised the membership. Mohs had a relentless work ethic. His attitude toward staff illness was “you may as well be in here working rather than being home feeling sorry for yourself.” After my fellowship at the Cleveland Clinic, I spent several months with Fred in 1980-1981. His focus on curing cancer sometimes precluded a warm beside manner (Fig. 2).

George L. Popkin, MD (1921-1999)

George was one of the early dermatologic surgeons at New York University (NYU). He and Perry Robins founded the *Journal of Dermatologic Surgery* in 1975. George was the third Editor-in-Chief, immediately before my term. George was the consummate gentleman teacher of dermatologic surgery. He served as President of the American Society for Dermatologic Surgery (ASDS) in 1977 and the International Society for Dermatologic Surgery (ISDS) in 1987. He was held in such high esteem by ASDS that he was re-elected to the Board

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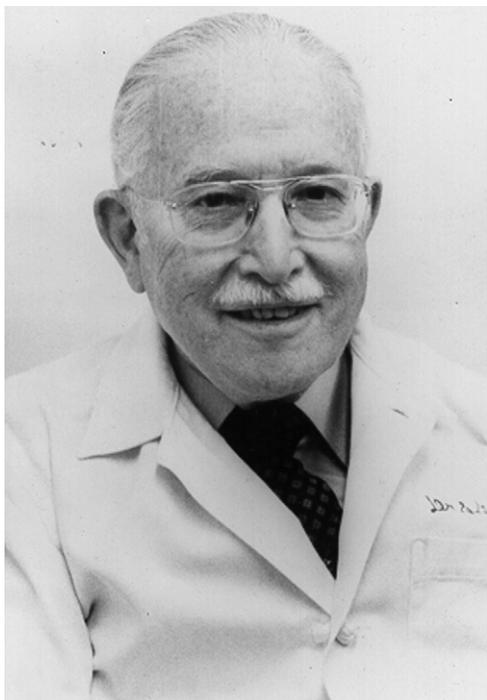


Figure 1 Leon Goldman.

again many years after his Presidency. George directed the NYU Tumor Conference for 20 years. A “hush” would occur in the room whenever he spoke. He was an outspoken supporter of Mohs Surgery and was elected as the first honorary member of the American College of Chemosurgery. George received the Stegman Award from ASDS in 1997 (Fig. 3).



Figure 2 Frederic E. Mohs.

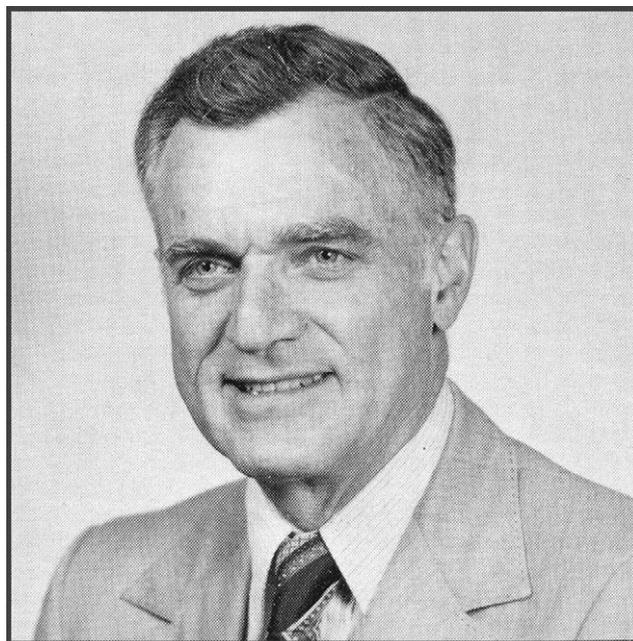


Figure 3 George Popkin.

Norman Orentreich, MD (Born 1922)

Norman Orentreich had a huge dermatology practice in New York. His senior partner, Abner Kurtin, developed and refined modern dermabrasion techniques. Norman performed the first hair transplant in the United States and popularized the technique. He was the first President of the ASDS (1970). He lectured and published widely, and was the acknowledged leader in dermatologic surgery during his practice lifetime. Two of his children became successful dermatologic surgeons (Fig. 4).



Figure 4 Norman Orentreich.

Edward A. Krull, MD (1929-2008)

Although dermatologic surgery had been around for many years, it was Edward Krull who was instrumental in gaining recognition for dermatology as a medical-surgical specialty from the Accreditation Council for Graduate Medical Education in 1991. He became Chair of Dermatology at Henry Ford Hospital in 1976 and led the department until the 1990s. He pioneered dermatologic surgery at Henry Ford and nationally, as well as mentored more than 250 residents. Dr Krull held many leadership positions, including 5 presidencies: Founding President of the Association of Academic Dermatologic Surgeons (AADS) (1988), President of ASDS (1982), President of American Dermatological Association (ADA), President of American Board of Dermatology (1994), and President of Michigan Dermatology Society. He served as Vice President of the American Academy of Dermatology (AAD) (1987) and Chair of the Residency Review Committee for Dermatology (RRC) for dermatology. He received many honors, including the Gold Medal and Master Dermatologist Awards from AAD, Leon Goldman Award from ASDS, and Fred W. Whitehouse Distinguished Service Award from the Henry Ford Medical Group (Fig. 5).

Perry Robins, MD (Born 1930)

When the history of dermatology is finally written, Perry Robins will have an honored place in it. He is the ultimate “connector” who brings people together and motivates them to complete important projects. Perry learned Mohs surgery from Dr Mohs in the late 1960s, and established the first 1-year training program at NYU in 1970. With a bigger-than-life personality and a



Figure 5 Edward Krull.



Figure 6 Perry Robins.

physique to match, Perry popularized Mohs surgery and taught a multitude of fellows. He wrote articles, and founded journals and societies. “No” was never an option or a deterrent for him. In 1975, he founded the *Journal of Dermatologic Surgery* (now *Dermatologic Surgery*), and served as the first Editor-in-Chief. He was one of the early Presidents of the ACMS and ASDS (1989). He was the founder and first President of ISDS (1979). He founded the Skin Cancer Foundation (SCF) in New York and still serves as President. SCF has a worldwide presence and sponsors the World Congress on Cancers of the Skin each year. In 2001, he founded *The Journal of Drugs in Dermatology* and served as the first Editor-In-Chief (Fig. 6).

Theodore A. Tromovitch, MD (1932-1990)

Ted Tromovitch was a true gentleman and a wonderful dermatologic surgeon. His greatest contribution may have been to train Sam Stegman, Rick Glogau, and others. He studied with Fred Mohs in the mid-1960s, and initiated Mohs Chemosurgery at University of California at San Francisco (UCSF). He and Stegman developed the fresh-tissue technique. He served as the third President of the American College of Chemosurgery and also served as President of ASDS (1978). He was generous and kind. In 1983, I visited his office and commented on a copy of Fred Mohs’ original book (1953) on his bookshelf. The book was long out of print and I had never seen one before. Several weeks later, a copy of the book appeared in my office at Indiana University, courtesy of Ted. The ASDS Annual Meeting was held in Hawaii in the 1980s. I did not know Ted well and was totally in awe of him. One evening after dinner, the great Ted Tromovitch came over to our table, pulled up a chair, and conversed with my wife and young children for a long time. The 1-year dermatologic surgery fellowship at UCSF, directed by Ted, Sam,



Figure 7 Theodore Tromovitch.

and Rick Glogau, was highly sought after by the top dermatology residents (Fig. 7).

Henry H. Roenigk Jr, MD (Born 1934)

Henry was Chair of Dermatology for the first 2 years of my residency at the Cleveland Clinic Foundation (CCF). He had the energy of 5 men. He was also the best diagnostician I have



Figure 8 Henry Roenigk Jr.



Figure 9 John Yarborough.

ever seen. He devoted a great deal of time to clinical research and dermatologic surgery. As his career evolved, I believe his interest in surgery won out. He later became Chair of Dermatology at Northwestern University. He loved to travel and organized many postgraduate courses, especially in Hawaii. He served as President of ASDS (1983) and ISDS (1990). His son Randy is a leader in dermatology and has served as Chair of Dermatology at the Mayo Clinic (Fig. 8).

John M. Yarborough, MD (Born 1934)

John M. Yarborough codirected many dermatologic surgery postgraduate courses with Henry Roenigk Jr, Sam Stegman, and J.B. Pinski in the 1980s. John is a powerfully built man who trained in dermabrasion with Jim Burks. His physical strength allowed him to harness the difficult-to-control wire brush for dermabrasion. Many dermatologists traveled to New Orleans to train with him. John is also a gifted pianist and a southern gentleman with personal skills almost beyond description. John served as President of ASDS in 1993, and received the Stegman Award in 1996 (Fig. 9).

Saul Asken, MD (Born 1939)

Saul Asken was one of the first modern cosmetic surgeons in dermatology. He trained in dermatology at NYU and later trained in cosmetic surgery with the legendary plastic surgeon Richard Webster in Boston. Saul was certified by the American Board of Cosmetic Surgery, and was one of few dermatologists to be awarded Fellowship in the American Academy of Facial Plastic and Reconstructive Surgery.

For many years, Dr Asken directed a high-profile cosmetic surgery outpatient facility in Connecticut. He gained a high level of expertise in blepharoplasty and face lift. Webster felt Asken was a genius having mastered all the various surgical

approaches to blepharoplasty. He was one of the first to perform liposuction in the United States in the early 1980s. He authored 2 exquisite books on liposuction and fat transfer (1986, 1988). In 1986, he hosted the first International Workshop on Liposuction and Fat Transfer at his surgery center in Connecticut. He lectured and performed live surgery worldwide. His excellence in cosmetic surgery was combined with excellence in music and art. At age 83, Dr Asken is still a sculptor who also plays the cello in the Los Angeles Doctors Symphony Orchestra (LADSO.org). Saul was never one to draw attention to himself, but preferred to seek excellence in his craft and share it with other physicians. He is extremely proud of his 7 children (Fig. 10).

Samuel J. Stegman, MD (1939-1990)

Sam Stegman was the acknowledged charismatic leader of modern dermatologic surgery. He had many gifts. As a high school student in Peru, Indiana, he received the Alexander Hamilton Award that was given to the top high school debate student in the United States. The Award, which included a 4-year college scholarship, was presented to Dr Stegman by President Eisenhower. Sam trained in dermatologic surgery with Ted Tromovitch in San Francisco. Tromovitch and Stegman published their extensive experience with fresh-tissue Mohs Surgery in 1974. After the publication, fixed-tissue Mohs Surgery using zinc chloride paste became a thing of the past. Even Fred Mohs largely converted his practice to fresh-tissue technique. Sam and Ted were interested in all aspects of dermatologic surgery. The books they published included chapters on liposuction, face lift, and blepharoplasty. When-



Figure 10 Saul Asken.

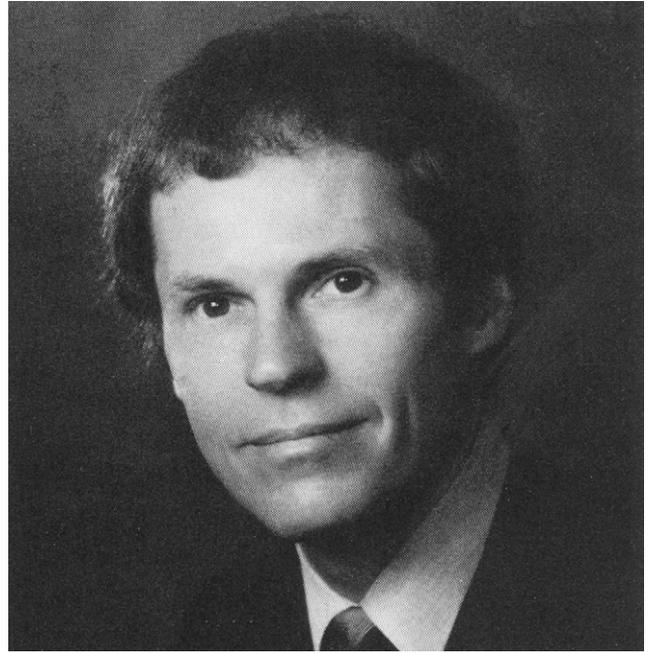


Figure 11 Samuel Stegman.

ever Sam gave a lecture at a national meeting, nearly all the chairs were full. We were all there trying to figure out where dermatologic surgery was going next and what we needed to learn (Fig. 11).

Philip L. Bailin, MD (Born 1943)

After a dermatology residency at the Cleveland Clinic Foundation (CCF), Phil Bailin completed a dermatopathology fellowship at the Armed Forces Institute of Pathology in Wash-



Figure 12 Philip Bailin.

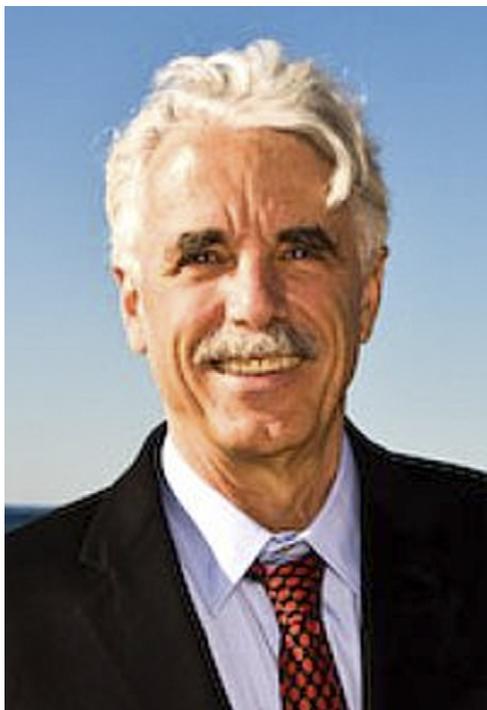


Figure 13 Jeffrey Klein.

ington, DC. He then trained in Mohs Surgery in Madison, Wisconsin, with Frederic Mohs, and joined the staff at CCF. He founded the 1-year Mohs Surgery Fellowship Training Program at CCF in 1976. This program has trained fellows continuously since then and is the longest-running program in the country. Dr Bailin later became Chair of Dermatology (1977-2005). He later earned an MBA, and then became Vice Chair of Internal Medicine at CCF. He has been a leader in Mohs Surgery and laser surgery, as well as national organiza-



Figure 14 Alastair Carruthers.



Figure 15 Jean Carruthers.

tions. Dr Bailin is 1 of the only 3 dermatologists to have been elected President of the ACMS (1988-1990), the ASDS (1990-1991), and the Association of Academic Dermatologic Surgeons (Fig. 12).



Figure 16 John Zitelli.

Table 1 Timeline: Major Milestones in the History of Dermatologic Surgery

1952	Mackee reports his 50-year experience with phenol peels ¹
1952	Norman Orentreich performs his first hair transplant in New York
1953	Abner Kurtin develops modern dermabrasion techniques ²
1956	Epstein publishes the first of 6 editions of <i>Skin Surgery</i>
1959	Orentreich publishes early results with hair transplantation ³
1960	Sam Ayres reports on phenol and Tumescent Local Anesthesia (TLA) for aging skin ⁴
1961	Leon Goldman is the first physician to treat patients with laser ⁵
1966	Zacarian reports on cryosurgery with liquid nitrogen ⁶
1966	Muller's first article on ambulatory phlebectomy ⁷
1967	American College of Chemosurgery is founded by Frederic Mohs
1967	Tromovitch and Stegman begin using Mohs "fresh-tissue technique"
1970	The American Society for Dermatologic Surgery (ASDS) is founded
1970	Perry Robins establishes the first 1-year Mohs surgery fellowship at New York University
1974	Tromovitch and Stegman publish on "fresh-tissue technique" ⁸
1975	Robins and Popkin found the <i>Journal of Dermatologic Surgery</i>
1977	<i>Journal of Dermatologic Surgery</i> is renamed the <i>Journal of Dermatologic Surgery and Oncology</i>
1978	Unger and Unger describe scalp reduction ⁹
1979	Perry Robins founds the International Society for Dermatologic Surgery (ISDS)
1981	American Society for Lasers in Medicine and Surgery (ASLMS) is founded by Goldman and Drake
1982	Florida Society of Dermatologic Surgeons is founded
1982	Bruce Chrisman publishes on hypertonic saline injections for leg veins ¹⁰
1986	Saul Asken publishes <i>Manual of Liposuction Surgery</i> ¹¹
1986	American College of Chemosurgery becomes the American College of Mohs Micrographic Surgery and Cutaneous Oncology (ACMMSCO)
1987	Jeffrey Klein publishes his first report on tumescent technique for liposuction ¹²
1987	Alastair and Jean Carruthers begin cosmetic use of botulinum toxin
1987	ASDS becomes a member of the American Medical Association (AMA) House of Delegates
1989	Association of Academic Dermatologic Surgeons is founded by Edward Krull and Neil Swanson
1990	International Society of Cosmetic and Laser Surgeons (ISCLS) is founded by Larry David
1990	Tromovitch and Stegman die prematurely
1993	Norwood and Stough found International Society for Hair Restoration Surgery (ISHRS)
1993	ASDS becomes 1 of 13 sponsoring organizations for the Accreditation Association for Ambulatory Health Care (AAAHC)
1995	<i>Journal of Dermatologic Surgery and Oncology</i> is renamed <i>Dermatologic Surgery</i>
1995	<i>Dermatologic Surgery</i> is purchased by ASDS from Elsevier (negotiated by ASDS President C. William Hanke)
1998	The term "tumescent local anesthesia" is coined in a book on liposuction by Sommer et al ¹³
2000	Jeff Klein publishes his comprehensive text on tumescent technique ¹⁴

Jeffrey A. Klein, MD (Born 1944)

In the early 1980s, Jeff Klein was looking for a safer and better way to perform liposuction. Fortunately, he discovered it. In 1986, I was Editor-In-Chief of the *Journal of Dermatologic Surgery and Oncology* (now *Dermatologic Surgery*), when Jeff submitted one of his manuscripts for publication. I had been interested in liposuction and had heard of Jeff's work. Before assigning the manuscript to reviewers, I called Jeff to arrange a visit to his office. I stayed for several days. His tumescent technique was genius, but some of the liposuction hardware was difficult to use. It took several years for the equipment to catch up with the simplicity of his technique. Many dermatologists read Jeff's publications and adapted his techniques. Others used his basic concepts to develop their own modifications of the technique. Jeff published his comprehensive text on Tumescent Anesthesia and Microcannular Liposuction in 2000. Anesthesiologists felt that the tumescent technique of liposuction should be regulated as regional anesthesia. I felt this was inappropriate. In 1998, I coauthored a comprehensive book on liposuction with Sommer, Sattler,

and Klein. Although the book was initially published in German, I insisted on the title *Tumescent Local Anesthesia* (in German). This term made sense to me because the tumescent technique was a variant of local anesthesia with the same safety profile. It was much different from standard regional anesthesia as defined by anesthesiologists. Our book, *Tumescent Local Anesthesia*, was translated into English and published in 2000 (Fig. 13).

Alastair and Jean Carruthers, MD (Alastair Carruthers [Born 1945]) (Jean Carruthers [Born 1948])

The Carruthers have created the ultimate partnership of a Canadian pediatric ophthalmologist and a British-born dermatologic surgeon (Alastair). Alastair completed a dermatologic surgery fellowship with Tromovitch, Stegman, and Glogau in San Francisco (1982-1983). During the same year,

Jean studied botulinum toxin's use in pediatric ophthalmology. They returned to Vancouver where Alastair became an academic dermatologic surgeon and Jean became an academic pediatric ophthalmologist. Their joint observation that botulinum toxin can affect the muscles of facial expression began a revolution in cosmetic dermatology. In 2012, they received the Eugene J. VanScott Award for Innovative Therapy of the Skin and the Phillip Frost Leadership Lecture Award from the AAD. Alastair served as President of the Canadian Dermatology Association (1998-1999) and the ASDS (2006-2007). Alastair received the Stegman Award from ASDS in 2010 (Figs. 14 and 15).

John A. Zitelli, MD (Born 1950)

I first met John in 1980 when he was a fellow with Fred Mohs in Madison. After his training, he established the Mohs Surgery Unit at the University of Pittsburgh. John's dedication to excellence in cutaneous oncology and reconstruction of wounds is legendary and has elevated the specialty. Everything about John is organized to perfection. His procedural dermatology fellowship training program (with David Brodland) is highly sought after by dermatology residents. I have visited his office on several occasions and each time I have learned something useful. John is a past President of ACMS, and he received the Distinguished Service (1996) and Frederick E. Mohs Award (2005). He received the Stegman Award from ASDS in 2007 (Fig. 16).

Conclusions

Dermatologic surgery has blossomed into a full and diverse specialty with many elements (ie, excisional surgery, Mohs

micrographic surgery, lasers, fillers, and other sophisticated techniques). The future of the subspecialty is bright, as dermatologists are the key thought leaders for the field. Many new procedures and advances lie ahead. (Table 1).

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