

## New and Emerging Treatments in Dermatology: Five Stories

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So-called biologic drugs for skin disease and cancer have already transformed dermatology. The advent of topical and systemic therapy with mRNA, genes, viral vectors and cells, starting now with specific examples, is likely to have equally high impact. Novel devices will also add novel capabilities. Thousands of full-thickness skin cores can be rapidly removed using a coring needle device, without scarring. By removing skin, facial skin coring reduces laxity and wrinkles associated with aging. Also, using skin cores for wound grafting will soon be the first example of grafting accomplished without donor site scarring. Injectable ice, in the form of a sterile ice slurry, is emerging to allow new cryolipolysis treatments. Beyond local fat reduction, injection of sterile ice slurry can cause long-acting nerve block, potentially allowing new treatments for pain and/or itch. Type-I neurofibromatosis is the most common single-gene disease of mankind, in which most people gradually develop many disfiguring, pruritic skin tumors. My laboratory group is comparing novel laser (alexandrite and Nd:YAG) and injectable (deoxycholate) treatments, with promising clinical results that will be summarized. Finally, after many years in preparation the first lasers that directly target sebaceous glands as a treatment for acne, have just entered dermatology. Conceptually similar to laser hair removal, but using sebum lipids rather than melanin as the primary chromophore, 1726nm lasers delivered with good skin cooling are an effective drug-free treatment for the most prevalent skin disease, acne vulgaris. All five of these emerging arenas for new treatments could be transformative for the patients we serve.